The Illinois Medical Journal.

The Official Organ of The Illinois State Medical Society.

Vol. VI. No. 2. 25c per copy | Springfield, Ill., July, 1904. | Subscription $5.00 a Year.

THE USE AND ABUSE OF DRAINAGE.*

BY J. H. STEALY, M. D., FREEPORT.

Intimately related with the successes of surgery and measuring the individual judgment as perhaps no other procedure does, the question of drainage, and its discussion nevertheless seems worn threadbare. But I have felt, in view of the increasing and what I consider alarming tendency to a more restricted use of this valuable and life saving procedure, that even at the risk of triteness it might be well to take a review of the question and attempt to determine if this tendency be really justified.

There is no one question, it seems to me, so dependent upon individual judgment as the decision to drain or not to drain in a given case, from the fact that as yet we have no formulated rules governing the question.

I do not question those cases well placed upon the other side, where a localized collection of pus can be removed without rupture of the pyogenic walls. But the various authorities who advocate the closure of the abdomen after the mere evacuation of septic material, depending upon the peritoneum to take care of the remaining infection, are maintaining a practice which is illogical and dangerous, and which is responsible for a vast amount of harm to the patients of the occasional operator, as well as possible harm to their own.

We all can recall cases of our own where the abdomen has been closed, and where the after history has shown us that it would have been wiser to have drained. And there have occurred within the last three years a number of notable cases, where the post mortem findings have justified the belief that the chances for recovery might have been enhanced had an avenue existed for the escape of septic material.

The whole effort of surgery in septic cases, as those sequel to an appendicitis, visceral wound, and various other lesions of organs of the abdominal cavity, is the release of the septic material and the drainage of the septic accumlations subsequent to the operation.

The advocates of non-drainage of these cases maintain that the peritoneum is able to care for the subsequent accumulations, if the retained septic material be released and a careful toilet be made by normal flushing, etc. But is it right here that the illogical nature of the theory becomes apparent.

The patient is supposedly in normal health at the onset of his trouble, be it appendicitis, pus tube or what not. He has proven his inability to take care of the infection with his peritoneum and emunctories in healthy condition. Is it reasonable to suppose that every case, relieved of the original accumulations of pus, is going to be able *now* to overcome the same and, by reason of its successful combat with the system, probably more virulent infection, with a damaged peritoneum and more or less deranged emunctories and weakened vitality, not to mention the shock resultant upon the operation? I think not. If the patient were in the first instance competent to combat the infection, where is the need for operation? If he be not capable of it, is he rendered more able to withstand infectious assaults by the evacuation of a certain amount of macroscopic septic material, which is by no means the whole of the amount, however carefully he be flushed out?

I grant that there are cases, and the majority too, which will go on to recovery without incident, after the drainless method, even after a violent infection, but these cases do not concern me. It is for the occasional case which would not recover were it not for the drain that I argue.

*Read at the 54th Annual Meeting, May 17, 1904.

It is thus that we reason for the early operation for appendicitis, not because appendicitis is always fatal; for we know that the majority of cases recover. But it is for the occasional cases that do not recover that we advise a routine operation on all cases. I recognize that this comparison is not a complete one, for appendectomy, properly done before the presence of pus without the walls of the appendix, leaves the abdominal wall as strong, practically as before, whereas it cannot be denied that the presence of a drain and the entailed secondary union in that portion of the wound lips in contact with foreign material, does to that extent weaken the abdomen. But I am confident that even this draw back has been over drawn. Out of some 1,500 laparotomies in my records, 207 cases were drained and I have the history of six where a post operative hernia occurred.

But admitting that even a far larger proportion of cases did require subsequent operations, is this to be held as against an occasional general peritonitis for the want of sufficient drainage?

Prof. Clark of the University of Pennsylvania, whose views Robert T. Morris upholds, states that "Drainage is directly opposed to scientific knowledge" and in a study of 1,700 cases states that:

1. There is a great decrease of microorganisms within one hour after their intraperitoneal destruction and their rapid absorption into the general system; and the consequent inability to limit septic matter to any free surgical field within the abdomen.

2. Vigorous streptococci, which remain behind, develop a destructive quality for leukocytes, precipitating a lethal fight before drainage is set up.

In his first argument I consider that he thereby argues for drainage. The current of the peritoneal lymph is from pelvis to diaphragm. This current tends to carry the infection in this direction thus spreading it, as the phagocytes can not neutralize the bacteria in the short time required to carry them the length of the abdominal cavity. It is as he states impossible to limit the field of infection. Therefore, by the use of the drain, which by force of its capillarity, is able to reverse this current from diaphragm to pelvis to a large extent, do we at least impede the progress of bacteria.

In his second argument he practically admits that drainage may be of benefit in some cases, where he says that: "A lethal issue has been determined before drainage is made." And who is there able invariably to say an infection is streptococcic?

Morris, who perhaps is one of the foremost in the field advocating less drainage, certainly does get some remarkable results. But I question the prudence of placing any patient in jeopardy, as I consider it, even with a host of brilliant results, if thereby an occasional patient succumb. He mentions his objections to drainage in the following terms:

"Gauze packing in the abdomen causes ileus and obstruction by direct pressure. It more often causes excess of lymph, which may result in annoying peritoneal adhesions and leaves a weak spot in the abdomen. It depresses the patient and prolongs if not causing surgical shock." But I maintain that granted all of this, which I must confess appears overdrawn, the dangers of drainage and the sequela, are certainly as a rule rather to be chosen, than leaving virulent organisms in the abdominal cavity with no escape for their products should they not be overcome by the bodily resources.

And further, one of the important functions of drainage is to relieve pressure and tension, without which, with the exception of the virulent streptococci inflammation, bacterial effects are almost nil. It is therefore not necessary to provide a large drain in many cases, a mere vent for increased tension being sufficient. And it goes without saying that a drain must naturally be skillfully used for it is by its continued presence past the time of its necessity, that these evil effects are most apparent.

In many cases the insertion of a cigarette drain for 12 to 24 hours, long enough to enable the system to react, and relieving the abdomen of a serum, blood, etc., which later may become the medium for growth of bacteria, proves quite sufficient, and the draw-

ing together of the wound edges then by means of an untied suture, gives the abdominal wall as much strength as if the abdomen were closed primarily.

Prof. Ochsner, of Chicago, while admitting the greater tendency in the profession to immediate closure of the abdomen, conservatively states that while he drains much less than formerly, yet when in the slightest doubt, he always drains. Westbrook, in the Brooklyn Medical Journal very correctly draws the following conclusions: "There are as yet no well recognized formulae to guide the surgeon as to when to omit drainage in purulent collections attending appendicitis. 2. While it is true that the peritoneum may be relied upon to take care of a certain quantity of infectious material we have no means of estimating in any individual case what that quantity may be. It is contrary to experience to expect the peritoneum to care for any large quantity of infection, otherwise we should never have to operate for appendicitis or peritonitis."

3. "An estimate of the individuals resistive power to infection may be approximately made by the usual methods of consideration of the condition of his lungs, kidneys, etc., his pulse and temperature.

But we have no means of placing over against this at the time of operation, an accurate estimate of the amount and virulence of the infection with which the patients resistive powers will have to contend. We cannot estimate any individual susceptibility or immunity which he may possess."

4. "If the surgeon decides to omit drainage in any case of appendicitis with outlying infection he must do so relying entirely upon his personal ability to estimate the clinical facts in the case, and the nature and extent of the pathological process exposed at operation. Then if his previous experience has brought him to the point of omitting drainage, he is warranted in so doing."

5. "The majority of surgeons the world over still consider drainage necessary in all degrees of the class of cases under discussion and that we must consider the safer teaching. This is the position I have always taken, and I believe there is no reason as yet to change it." This is, I think, the keynote to the whole proposition.

In closing, I desire to emphasize one particular thing, not more connected with this subject than any other involving a radical departure from routine practice, especially involving questions of judgment.

Every man of authority has a very great responsibility upon his shoulders in the propogation of his views where this question of departure from accepted teachings is involved. Men of large surgical practice must remember that the very men who rely upon their words in matters surgical are the very men who by lack of experience have less sound judgment in matters such as of this question of drainage. What to the specialist seems a simple question, to the occasional operator is a matter of great perplexity, and ten to one they allow the word of the specialist to decide for them. If that word be ambigious or doubtful, the patient suffers. In the same way, while I am convinced of the utility and soundness of Dr. Ochsner's much misunderstood starvation treatment for appendicitis, I have time and again seen the unfortunate results of his teaching in cases long gone past medical or surgical aid, because the cases lacked a master's eye to foretell impending danger and the need of operation.

It is thus that I fear for the teachings as to less drainage. To men of large surgical experience, the decision not to drain in cases of pus is made with a large experience to aid in the settlement of the question. But it will I am confident mean disaster to the man of less experience who lacks the facilities for a perfect judgment to correctly select his case.

97 Stephenson street.

SUBCUTANEOUS INJURIES OF THE ABDOMINAL WALLS AND VISCERA.*

BY DANIEL N. EISENDRATH, A. B., M. D., CHICAGO.

In taking a retrospective view of abdominal surgery in the past twenty years one is

*Read at the 54th Annual Meeting, May 17, 1904.

struck by the fact that, comparatively speaking, the treatment of injuries of the abdominal viscera without external signs has progressed rather slowly.

The increased number of reports of both successful and unsuccessful intervention shows that the interest of the profession has been aroused both in this country and abroad, especially during the past eight or nine years. Up to that time a patient who had been stabbed or shot, and who had some palpable evidence of injury in the shape of a wound of entrance, received far more attention than one who had often sustained graver and more frequently fatal injuries, but who perhaps had only a few abrasions on his abdomen.

The practitioner or surgeon, or both, were only too often content with making a diagnosis of "internal injuries" and calmly watch the patient succumb to a septic peritonitis from a perforated intestine or bladder. The same physician who would urge immediate laparotomy for a ruptured extrauterine pregnancy on account of the rapidly increasing symptoms of anemia from hemorrhage into the free peritoneal cavity, would often sit apparently hoplessly by the bedside of a man or woman who showed the same symptoms from the rupture of a spleen or liver or kidney, as the result of a crushing blow upon the abdomen, and not be aware of the fact that a laparotomy with extirpation of the spleen or the simple tamponade of a bleeding liver is even easier than the removal of a bleeding tube.

Ruptures of the abdominal viscera without external signs are more frequent than the combined number of gunshot and stab wounds of the same organs.

Of 362 cases of injury of the liver collected by Edler, in 1885, 50%, or 184, were without external signs and the remainder due to stab and bullet wounds. A similar ratio held true for injuries of the spleen.

Many lives could be saved every year if the diagnosis of a rupture of one of the abdominal viscera were made early enough, so that the question of surgical intervention might be discussed at a time when the percentage of chances of success are greatest. This is in the first six to twelve hours after the injury. As I will show below, it is practically useless to make a diagnosis of a perforation of the bladder or intestines after the first twenty-four hours, or to hope to compensate for the tremendous hemorrhage following a laceration of the spleen, liver or kidney after the first twelve hours.

I trust that the reading of such papers as the present one will draw the attention of both the surgeon and practitioner to this fertile field for their diagnostic skill. Whenever a man or woman has fallen from a height, been kicked by a horse or human being over one of the abdominal regions, or thrown against a wagon pole or some other projecting object, or the trunk has been crushed, or some blunt missle been thrown at him, do not fail to look for symptoms of a ruptured viscus, and give the patient at least the benefit of our latest observations in this direction. In many cases your watchfulness will be rewarded by the saving of a life which would have been lost without prompt surgical intervention.

When I am called to see a case with the history of one of the above modes of injury, my first thought is to consider which organ can have been injured. A practical division into hollow and solid viscera facilitates such a differential diagnosis, and by painstaking observation of the general and local conditions a probable and often positive opinion can be formed, not only of whether any organ has been injured, but also of which particular one, so that the abdominal incision can be made as close as possible to the seat of injury.

Amongst the hollow viscera may be included, in the order of frequency of their injury, the small and large intestine, urinary bladder, stomach, gall-bladder and ureters. The solid viscera, also given in the order of their frequency of injury, are the kidney, liver, spleen and pancreas.

Ruptures of the kidney and intestine formed over 60% of 143 cases of all varieties collected by Makins and Neumann.

The reason for this is that the intestines have behind them the firm spinal column, and are only separated from the abdominal wall in front by the omentum, so that they

are most frequently caught between the place where the abdomen is struck, and are then crushed against the spinal column. Such a mechanism of injury occurs when the ileum or jejunum are crushed and torn, because the coils of this portion of the intestines are more mobile and are readily compressed against the firm spinal column.

A second variety of injury of the small intestine and at times, although far more rarely, of the large intestine, is a tearing off of the bowel say at the duodeno-jejunal flexure, or in the ascending or descending colon by a force which separates the bowel from its rather fixed point of attachment.

The reason why the kidney, like the intestine, is so frequently injured has been variously explained. According to some, it is compressed by a crushing force between the rigid spinal column and the last two ribs; according to others, it is the action of the force upon a body full of liquid, which causes it to burst. (Kuster's hydrostatic theory). The spleen and liver are fairly well protected by the lower six or seven ribs. They lie in close contact with these bones, being separated from them by the diaphragm and lower borders of the lungs. A fall from a height, however, will allow the liver, by reason of its own weight, to be torn from its firm ligamentous attachment to the diaphragm. Similarly, a fall upon some blunt object, or a crush between two resistant bodies, as being run over, or the compression of the lower part of the thorax, caused by running into a wagon pole or being struck by some object, as in one of my cases, where a monkey wrench was thrown at a boy, or as in another case, where a man was struck a blow by a policeman, or a horse kick, all of these are liable to cause a rupture of the spleen or liver. The organ is caught between the force and the ribs lying behind them, as well as the spine, and crushed.

The empty urinary bladder is seldom injured, because in the adult it lies well within the bony pelvic ring. In the child, however, a less degree of fullness than in the adult favors a rupture, as in the case to be spoken of below, because the bladder in children lies only in part in the pelvis. In adults the bladder, when full, is most likely to tear at the fundus. Such a rupture is often associated with fracture of the pelvis. It may be situated entirely in that portion of the bladder which is covered by peritoneum, thus allowing the urine to escape into the general peritoneal cavity, giving rise to the intraperitoneal variety of rupture. On the other hand, especially in fracture of the pelvic bones, it is torn at some point not covered by peritoneum, permitting the urine to escape into the pelvic cellular tissue, and even into the abdominal wall as in my own case (see below).

The gall-bladder, ureter and pancreas are seldom the seat of injury, because they are well protected by surrounding viscera.

What are the pathology and results of the rupture of the individual viscera? Only the capsule of the kidney, liver and spleen may be torn and heal spontaneously without symptoms. If, however, a laceration of the parenchyma occurs, it may vary from a simple tear, extending deeply into the organ, to complete pulpification.

The immediate effect of these latter injuries is a more or less severe hemorrhage, which in the case of the liver and spleen escapes into the free peritoneal cavity, and gives rise, as we shall see shortly, to dullness in the dependent parts, and to symptoms of acute anemia. In 143 cases of death from rupture of the liver, hemorrhage was the cause of death in 59. In the kidney injuries, the blood in the majority of cases escapes into the perirenal tissues, and along the ureter, causing hematuria. In a small number of cases the peritoneum in front of the kidney was torn, allowing the blood to flow into the general peritoneal cavity, and giving rise to the same group of symptoms as in rupture of the liver and spleen.

The hemorrhage from the solid organs may cease spontaneously, and in the case of the extraperitoneal kidney lacerations this blood will, in the majority of instances, be absorbed and the patient recover. But when there has been a temporary stasis of bleeding in ruptures of the spleen and liver, and intraperitoneal injuries of the kidney, the pa-

tient may have a recurrence of bleeding from dislodgment of the clot, or may succumb to a sepsis from infection of the large quantity of blood in the peritoneal cavity.

In the case of the hollow viscera, like the stomach, intestine and bladder, the conditions are even less favorable than in the solid or parenchymatous viscera.

The chances of a walling-off of the escaping intestinal contents or urine are very slight, and the mortality of non-operated cases is almost 95%; 11 out of 160 cases not operated upon recovered with formation of fecal abscess.

In intraperitoneal rupture of the bladder, the prognosis is fully as bad if not operated upon.

When the urine escapes into the general peritoneal cavity, peritonitis develops within forty-eight hours. In extraperitoneal ruptures the loose pelvic cellular tissue becomes infected a little more slowly, but causes sepsis and death in the end.

Every patient should be examined in a more or less systematic manner as follows:

1. How did the accident occur? Was he crushed, run over, struck a blow over the abdomen, have something thrown at him; did he fall from a height upon his feet or buttocks?

2. Exactly what part of his abdomen received the main impact of the blow? If in the region above the umbilicus in front, suspect injury of the liver, spleen, kidney, gallbladder, stomach and duodeno-jejunal flexure, or tears of the mesenteric vessels. If below the umbilicus in front, suspect the small and large intestine, urinary bladder and ureters. If the main impact of the blow was received over the lumbar regions, examine for injuries of the kidneys.

3. What is the patient's general condition? Has it improved or grown worse since the time of the accident? The first effect in many cases of a blow upon the abdomen is great shock, with all of its typical symptoms. This primary shock is often not recovered from and continues up to the time the patient is seen by a medical man. If, with such a history of continuance of primary shock, with rapid, small pulse, great pallor of the skin and visible mucous membrane, restlessness, thirst, there are other signs of internal hemorrhage, one should suspect that one of the solid viscera, like the spleen, the liver, or kidney, has been torn, and if there is no improvement in the patients condition within six to eight hours from the time of injury, the chances for amelioration of the symptoms is slight. In other cases the primary shock or primary syncope is recovered from by the time the patient is examined, and we must then depend upon the history of the injury, the local conditions which can be obtained by physical examination (see next subdivision), and a gradual increase in symptoms of anemia, or of peritonitis for our diagnosis. This class of cases will be discussed more fully below.

In a third class there has been apparently no primary shock at all, and we have simply the history of an injury, and the results to be obtained by a careful local examination of the patient's abdomen, and observation of his pulse as to increase in rate, in order to make our diagnosis. It is this last class of cases to which we are called, with only the history of an injury, in which rupture of the abdominal viscera is so often overlooked until the symptoms of peritonitis or of internal hemorrhage are so evident that surgical intervention is too often of no avail.

4. A careful physical examination of the patient's abdomen is one of the most valuable aids in making a diagnosis. This may be conducted in a systematic way like an ordinary physical examination, beginning with inspection of the abdomen. (a) One should look for abrasions, bruises, or the evidences of a traumatic hernia, all of which may aid us somewhat in determining over what portion of the abdomen the greatest amount of force acted. The history of the injury at this stage will aid us greatly, because in some cases the force acts in a circumscribed manner, as, for example, a human or a horse kick upon some one point of the abdomen, where it often leaves slight traces. Similarly, the history of a more diffuse force, such as violence from a crushing between two cars, or between the axle of a wagon and a wheel, will

aid us in determining whether a viscus at some distance from the skin, abrasions or bruises which may be present in the case, has been injured. Following this examination of the skin, one should take the next step in the physical examination, that is, palpation of the abdomen. First, determine whether there has been a fracture of any of the ribs, because such a fracture is often accompanied by ruptures of the spleen, liver, and kidney. Next determine whether there has been a fracture of any of the pelvic bones, especially in the region of the symphysis pubis, because such a fracture is frequently accompanied by ruptures of the bladder and of the urethra. The next step in palpation is extremely valuable, namely, to find out where the greatest degree of tenderness exists, because this will often lead to the determination, especially in the early hours, as to whether a visceral injury has occurred, and is regarded as one of the most valuable signs by the majority of surgeons. A second extremely important symptom to be determined by palpation is one to which French and German surgeons attach great value, namely, the presence of a more or less localized rigidity of the abdominal wall, especially if it persists during a number of hours of observation of the case. Palpation will further aid, as in one of the cases I will shortly describe, in determining whether the protrusion is due to hernia, or a blood clot.

After these steps of inspection and palpation of the abdomen, which may have yielded valuable evidence of injury, a third subdivision of this physical examination consists of careful percussion of the abdomen.

By this aid we can determine whether there is dullness present in the flanks and also whether there is any change in the area of dullness when the patient is turned upon his side. In some cases it may be very difficult to elicit any changes on account of the rigidity and pain.

In ruptures of the spleen and liver, as well as in those of the kidney, in which the blood has escaped into the general peritoneal cavity, dullness appears quite early in the dependent parts, and if the blood has not all clotted, the anterior border of the area will change according to the position of the patient, just as in ascites. In many cases there is also an increase in the size of the areas of dullness of the spleen and liver when these are torn. In extraperitoneal ruptures of the kidney dullness extends much farther toward the front of the abdomen than the normal kidney dullness.

In ruptures of the bladder the lower part of the abdomen will show distinctly increasing areas of dullness.

This latter sign I have found to be of great value in the diagnosis of the two cases of extraperitoneal rupture upon which I operated.

After having made the examination in the order given above, consider some of the individual symptoms, such as vomiting, increasing tympanites, and rise in pulse rate; in other words, the symptoms of peritoneal irritation which are followed rapidly by those of a more or less extensive peritonitis.

Vomiting which continues for some hours after the injury points strongly to intestinal perforation. Increasing tympanites and a constant rise in the pulse rate are indicative of beginning peritonitis.

Hematuria with or without renal colics points strongly to rupture of the kidney or uterer, especially if it increases in severity. A constant desire to urinate without the ability to do so is characteristic of injury to the bladder. The test by which a certain amount of sterile fluid is injected into the bladder, and the same quantity is expected to return, if there is no perforation, is so apt to lead to wrong results that but little reliance can be placed upon it.

HOW SHALL WE TREAT THESE CASES?

If we have made a diagnosis of rupture of the intestine or urinary bladder, the sooner the case is laparotomized, the better the chances for recovery. The same holds true for ruptures of the spleen and liver. Left to themselves, over 80% of the cases of spleen and liver injuries, 93% of those of the intestine, 89% of the extra and 98% of the intra-peritoneal ruptures of the bladder, will die. The outlook for spontaneous recovery in laceration of the kidney is far bet-

ter. About 65% of such cases will recover without operation.

Through earlier diagnosis and operation the percentage of recoveries is constantly increasing.

Up to 1890, 3 cases of rupture of the spleen had been operated, with 100 cases. In an article written by me in 1902, the percentage of recovery in 50 collected cases was 56%, or 28 cases. Of these 28, 27 had been operated upon since 1895. I have been able up to the present time to collect 110 cases of ruptured spleen which were operated, of whom 65, or 59% recovered, and 45, or 41% died.

In 1896, Petry collected 36 cases of rupture of the intestine, which had been laparotomized, with 52% mortality. Since 1896, I have found reports of 50 cases, with 23 deaths (46%), and 27 recoveries (54%).

The same improvement holds true for ruptures of the liver. Up to the present time I have collected 46 cases, with 21 deaths (45%), and 25 recoveries (55%). The percentage of recoveries after intra- and extraperitoneal bladder ruptures has increased in a similar proportion.

There can no longer be any question that surgical intervention is called for as soon as a diagnosis of rupture of abdominal viscera has been made. The only exception is in the treatment of ruptures of the kidney, where the results have been far better with the expectant treatment unless the symptoms indicate operative interference. Such symptoms, in the case of an intraperitoneal laceration of the kidney, cannot be distinguished from those of a rupture of the spleen or liver. In the case of an extraperitoneal rupture, the destruction of kidney substance may be so extensive as to involve one of the larger branches of the renal artery, under which circumstances the hemorrhage would continue, giving rise to the symptoms of constantly increasing anemia, and a nephrectomy be indicated. At times, after the rupture of a kidney and the formation of a large retroperitoneal hematoma, the onset of temperature and other signs of sepsis will also lead to operative measures. The site of the incision should vary somewhat, depending to a great extent upon the diagnosis previously made of the viscus which has been injured. If the symptoms are those of an internal hemorrhage, and it is not possible to diagnose as to whether this comes from the spleen, liver, or kidney, or from a rupture of a mesenteric artery, it will be found best to make an incision in the median line above the umbilicus, evacuate the blood, which is usually found in the shape of large clots, as rapidly as possible, and after removal of as large a quantity as can be reached with convenience through the incision, a systematic search should be made, first of the right and left lobes of the liver, then spleen, and lastly the hand inserted deep into the peritoneal cavity to determine whether there has been a laceration of the kidney, with hemorrhage into the free peritoneal cavity. In the case of ruptures of the liver, the method of treatment consists either of suture, cauterization, or tamponade. In general, it will be found very difficult to insert sutures into the bleeding liver, and the best results usually follow tamponade.

The Paquelin cautery has also been tried at times to stop the bleeding, but as just stated firm pressure through tamponning with gauze will in almost every case check the hemorrhage. If, after examination of the liver, this organ be found intact, the next viscus to be examined in the systematic search is the spleen. The majority of the successful cases of rupture of the spleen which were laparotomized were treated by splenectomy. This is a perfectly safe and easy procedure, and consists in bringing the spleen forward into the abdominal incision and ligating its pedicle after transfixing it, so as to prevent slipping of the ligature. Several successful cases of suture of the ruptured spleen and also of tamponade have been reported, but removal of the spleen seems the shortest and safest procedure. It is not followed by any ill results, since the other blood-making organs seems to take up its function. In a number of the cases of splenectomy for ruptured spleen glandular enlargment and a moderate increase in lymphocytes has occurred, but was only transient. If the spleen has been examined, and also found free of

evidences of injury, search should be made in these cases of intraperitoneal hemorrhage for injuries of the kidney in which the hemorrhage occurs into the free peritoneal cavity. Such cases are best treated by making a second incision over the kidney, and either tamponning it or performing a nephrectomy. It was stated above that the incision in cases of suspected intraperitoneal hemorrhage from a ruptured spleen, liver or kidney, should be made in the median line above the umbilicus. This statement is subject to modification in this respect, that if there is strong suspicion of a rupture of the liver, the abdominal incision should be made at once along the right border of the right rectus muscle, and on the other hand, if there is sufficient evidence of a rupture of the spleen, the incision should be made along the left border of the left rectus, as these organs are far more accessible to these latter incisions. It must not be forgotten that ruptures of the viscera are frequently multiple, and this fact must not be lost sight of during the operation. In one of the splenectomy cases referred to below the bleeding did not cease after removal of the spleen because there was a tear in the superior mesenteric artery.

In those cases in which we have evidences or suspicions, at least, of a rupture of the lower portion of the intestine, especially of the ileum and jejunum, or a laceration of the bladder, the best incision is one in the median line, extending upwards from the symphysis pubis. The peritoneal cavity should be opened at once, and systematic search made for a perforation of the intestine, beginning at the ileo-cecal valve, and examining the bowel toward the duodeno-jejunal flexure. At the same time, the peritoneal surface of the bladder can be examined, and if no injury of this surface of the bladder or of any portion of the small intestine is found, the incision can be closed and search made for an extraperitoneal rupture of the bladder. If upon opening the extraperitoneal tissue above the pubis in such an operation fluid is found in the cellular tissue around the bladder, it points strongly to an extraperitoneal rupture, and it will not be necessary to open the peritoneal cavity until this perforation has been disposed of. The best method of treatment for a perforation of the intestine or of the bladder is to suture it by means of a Lembert suture of fine silk, in two layers, superimposed. In case the perforation involves the entire circumference of the bowel, or there is sufficient contusion to warrant a prognosis of gangrene of the bowel, a resection may be necessary. In the extraperitoneal ruptures of the bladder, if there has been considerable escape of urine into the pelvic cellular tissue, the best results can be obtained by suturing the perforation with a fine Lembert silk suture, and then inserting gauze drains around the bladder. When, as in the case mentioned below, there is a coincident rupture of the urethra, the safest plan is to make an incision into the bladder and bring the edges to the surface, and insert a drain, as in suprapubic cystotomy.

As was stated at the beginning of this article, the treatment of ruptures of the abdominal viscera does not differ in any particular from that of other lesions of the same viscera, the chief question being one of early diagnosis. My own cases consist of two of rupture of the spleen, in both of which unfortunately diagnosis was made too late; one rupture of the kidney, and two of the bladder and one of the abdominal muscles. I will only give a brief account of each case.

RUPTURES OF THE SPLEEN.

Case I. Boy, 16 years of age; had a monkey wrench thrown at his abdomen during a fight. Stated that he was struck over the left hypochrondriac region, and there was a slight ecchymosis at this point. He fainted immediately after the accident, but recovered rapidly, and was admitted to the hospital two hours after the injury, but was not seen by the writer until ten hours after the injury, when an immediate laparotomy was made. I found upon examination before operation that he was extremely pale, pulse 96, very soft; there was tenderness and rigidity over the left hypochondriac region, and dullness in the flanks. The anterior border of this dullness changed somewhat with change of position, indicating that some of the blood was still fluid. There was considerable tym-

panites, and the tenderness was becoming more marked, all over the abdomen, indicating a beginning peritonitis. The incision was made in the left border of the left rectus muscle, beginning at the costal arch. Enormous quantities of fluid and clotted blood were removed from the peritoneal cavity, and a rupture of the lower border of the spleen extending towards the hilum was found to be the source of the bleeding. Several attempts were made to suture this, but were of no avail and splenectomy was performed. He made an uneventful recovery from the operation for the first thirty-six hours, but from that time until the time of his death, on the third day, the pulse began to rise rapidly, and the symptoms of peritonitis recurred. The autopsy by the coroner showed a septic peritonitis. The writer feels confident that if he had been able to operate upon this case within two to four hours after the injury, recovery would have followed.

Case II. An Italian, unable to speak English, was admitted to my service with the following history, which I obtained from his friends: He had been ill for two days with pain in the abdomen, which both the patient and his friends told me was most marked in the right iliac region. Pulse was 110; temperature 102°, and there was considerable tympanites. He was extremely pale. I diagnosed the case as one of appendicitis with probable septic peritonitis, and had the patient prepared for operation. Just before the latter I learned from my house surgeon that he had been told by another friend of the patient's that the condition did not start spontaneously, but that he had been run over two days before the time we first saw him. Although I felt that in this case the outlook for operation was exceedingly dark, I nevertheless felt that there was a slight chance for recovery. I made an incision over the region of the spleen, where the friend said the wheel had passed over and found in addition to enormously distended coils of intestine a large amount of clotted and fluid blood in the free peritoneal cavity. This was rapidly removed, and it was found that there was an extensive laceration of the spleen. The splenectomy was exceedingly difficult on account of the distention of the bowel. After the pedicle of the spleen had been firmly tied and the organ removed, the bleeding still continued and seemed to come from the beginning of the mesentery at the left side of the second lumbar vertebra. I attempted in vain to insert forceps and tampons in this direction, and was compelled to desist from further operation on account of the condition of the patient, who died shortly afterwards. The coroner's autopsy showed a tear of the mesentery involving the superior mesenteric artery. This case emphasizes the importance not only of early diagnosis, but of obtaining as accurate a history as possible of the mode of injury, which latter is at times difficult in foreigners.

Case III. Rupture of the Kidney. This patient was a man 40 years of age, who was crushed between a heavy packing case which fell across his abdomen and a projecting piece of iron which pressed upon his lumbar region. When admitted to the hospital, he complained of severe pain over the left lumbar region, suffering from considerable shock, moderately pale, and pulse 100. There was a distinct swelling over the region of the left kidney, and in place of the normal resonance of the descending colon in the space between the left costal arch and crest of the ilium there was dullness, which, however, did not change with change of position of the patient. The first urine voided after the accident consisted almost entirely of blood. On account of the favorable prognosis in these cases of rupture of the kidney, under expectant treatment, an ice-bag was applied over the left renal region, and the patient carefully watched for evidences of increasing hemorrhage. He was given a dram of fluid extract of ergot every four hours. The area of dullness in the flanks did not increase during the following twenty-four hours, his general condition improved greatly, and in place of fluid blood the urine contained wormlike clots, which were passed with symptoms of renal colic. The hematuria gradually decreased; the urine was practically clear within forty-eight hours. This case was undoubtedly one of rupture of the kidney which recovered under expectant treatment.

Case IV. Extraperitoneal rupture of the bladder. The patient was a boy five years of age, who had been run over by a street car, the wheels passing across the region of the pubes. He was seen by me twenty-three hours after the injury in consultation with Dr. M. L. Goodkind, who had seen him one hour previously. Dr. Goodkind had made a diagnosis of rupture of the bladder, on account of the presence of dullness extending from the umbilicus on each side to the anterior superior spine of the ilium, so that the entire lower half of the abdomen was dull on percussion. This dullness did not change on turning the patient. Attempts to catheterize the patient were followed by the escape of a few drops of bloody urine. Pulse was 140, and the distention of the bowel interfered considerably with breathing, which was rapid and shallow. Temperature was 101°. Before proceeding to operate, I thought that I would make a final test by injecting four ounces of boric acid solution into the bladder through a catheter. The catheter was inserted and apparently seemed to enter a cavity corresponding about in distance from the external meatus, to the bladder. Four ounces of boric acid solution came back through the catheter, stained with blood. I mention this test to show how fallacious it may be, as referred to above under the head of diagnosis, and that too much reliance should not be placed upon it in making a diagnosis of rupture of the bladder. If it had not been for the presence of dullness above the pubis, and evidences of beginning sepsis, I would undoubtedly have left the case to its certain fatal outcome. However, I made an incision above the pubis, and upon opening the pelvic cellular tissue considerable quantity of fluid escaped. This had pushed the peritoneum covering the bladder up to the level of the umbilicus, and infiltrated the anterior abdominal wall up to the level of the external dullness. A separation of the symphysis pubis was found, and a perforation of the anterior wall of the bladder just opposite this fracture of the symphysis. The perforation was sutured; no attempt was made to correct the deformity caused by the separation of the pubic bone. Further exploration showed a complete rupture of the membranous portion of the urethra, so that the bladder lay practically free in the pelvis, and the cavity into which the four ounces of boric solution used as a test had escaped was a free space beneath the pubis and in front of the bladder. The catheter had never entered the bladder at all. The bladder was brought up into the incision in the abdomen and sutured. A rubber tube was inserted into it, and the extraperitoneal tissue drained with gauze drains. A perineal section was then performed, and the catheter introduced through the intact portion of the urethra across the intervening gap, where the membranous portion had been torn, into the bladder, it being necessary to introduce it from the bladder outwards (retrograde catheterization), on account of the difficulty of finding the proximal end of the urethra. This is a far more rapid way of finding the bladder end of the urethra, and greatly facilitates the operation. The boy made an uneventful recovery, but a stricture still remains at the point of the rupture of the urethra, which it will not be possible to deal with until the boy is old enough to have sounds introduced regularly for the purpose of dilating the same.

Case V. Extraperitoneal rupture of the bladder. My chief reason for publishing this case is for the purpose of emphasizing the necessity of looking for ruptures of the viscera when least expected. A Bohemian child, three years of age, was admitted to my service, with the following history: Six days before, the child, while its mother was away from the house, had fallen from a high chair to the floor, where it was found by the mother. The mother did not observe any immediate effects, and it was only after the second day that she noticed the child did not seem as well, and that the right side of the abdomen was gradually swelling. When admitted to the hospital, on the sixth day after the accident, the temperature was 102.6°; pulse 150. The child looked septic. Examination of the abdomen showed a doughy infiltration of the skin, more or less limited in front by the median line, and extending posteriorly almost to the spine. Downwards, it

extended as far as Poupart's ligament, and upwards towards the clavicle, there being marked edema of the mammary region. The child was catheterized and clear urine obtained, three ounces each time. There was dullness over the right half of the abdomen from the Poupart's ligament to the costal arch, merging into the liver dullness. This did not change on moving the patient. Every symptom pointed to a rupture of the bladder into the pelvic cellular tissue, but the clearness and quantity of the urine were puzzling, and rather contradictory of such a tear. Although this case also seemed hopeless, I made an incision above the pubis and found a considerable distention of the bladder, and an enormous infiltration of the tissues of the anterior abdominal wall and right half of the pelvis with urine. Examination of the bladder showed a tear in all of the coats of the viscus, except the mucous membrane, just opposite the brim of the pelvis, and after sponging away the urine one could observe how it escaped through this pseudo-filter drop by drop. This is not the first case which has been described in which only a partial rupture of the coats of the bladder has occurred, the effects being equal to those in which a complete rupture occurs.

I was at first puzzled to know how this injury could have occurred, but upon remembering that the bladder in children is almost entirely an intra-abdominal organ, one can readily understand how a child of this age can have fallen with its bladder full of urine and the organ strike upon the pelvic brim opposite which found the rupture. The extra peritoneal tissue was drained, and a number of incisions were made into the infiltrated abdominal wall, but were of no avail, the child dying after a few days.

Case VI. Subcutaneous rupture of the abdominal muscles. This patient was a man 40 years of age; he was admitted to my service, after having been crushed between two street cars passing in opposite directions. He was admitted to the hospital, suffering greatly from shock, and was seen by me two hours after the injury. A diagnosis of traumatic hernia situated over the middle of the rest of the ilium had been previously made by my house surgeon, Dr. Snyder. Over the point just described there was a tumor about the size of two fists, which was tympanitic on percussion, and which could be readily reduced into the abdominal cavity with a gurgle, similar to that obtained in the reduction of a hernia. After this manipulation a gap could be found in the muscles just above the crest of the ilium. In addition to this injury, there was a fracture of the clavicle and of the fifth and sixth left ribs. The patient had recovered somewhat from his initial shock but would not consent to operation until the following morning, fifteen hours after the injury. An incision made parallel to the crest of the ilium showed that all of the abdominal muscles attached to that crest from a point corresponding behind to the erector spinae had been torn off, and the same condition existed as far as the middle of Poupart's ligament, so that upon incising the skin one entered at once into the general peritoneal cavity, where a number of loose pieces of omentum were lying, in a cavity which had been formed through adhesions of the ascending colon to the anterior abdominal wall, thus separating the area of the injury in great part from the general peritoneal cavity. There was a slight contusion of the ascending colon. The abdominal muscles showed along their free edges evidences of extensive laceration. By means of fourteen kangaroo tendon sutures inserted in a mattress fashion, the torn muscles were brought down and anchored to the gluteal fascia as far as the anterior superior spine of the ilium in front, and from that point to the middle of Poupart's ligament they were sutured to the shelving edge of that structure, in a manner similar to that used in the Bassini operation. The patient made a rapid recovery, and examination one year after the injury shows that there is no recurrence of the hernia. This case is one of the first to be published of such extensive laceration of the abdominal muscles without external signs of injury, other than the slight hernial protrusion which upon first examination resembled somewhat a blood clot, and could only be distinguished from the latter by careful manipulation.

Discussion on the Paper of Dr. Eisendrath.

Dr. J. L. Wiggins, East St. Louis. Mr. President: This is a subject in which I am very much interested, and I believe it is one to which we should give more attention than we have heretofore. During the past several years I have had quite a number of these cases under observation, and I have been struck with the necessity of impressing one fact upon the surgeon and general practitioner, namely, that in a case of abdominal injury where there is any question as to its nature, the patient should receive the benefit of the doubt and have an early operation, yet when we consider the fact that general practitioners have perhaps not more than one or two cases under their observation in the course of their life's work, it is not strange that they frequently overlook them and let them pass the point where an operation would be advantageous. There is one point, viz.: accuracy of diagnosis concerning which I wish to take issue with the doctor. I see no way in which an accurate diagnosis of intra-abdominal injury can be made. Many of the gentlemen will doubtless recollect the case I reported to the Society several years ago, in which there was a rupture of the liver.

You have noticed that in the description of these cases, in nearly all of them is a statement made to the effect that the patient vomited blood, yet no rational explanation is offered as to the reason. In the case which came under my observation, this was perfectly clear in tracing cause and effect. The man was struck by a heavy piece of casting; suffered slight shock; was taken to the hospital where I saw him shortly afterwards. He reacted promptly, but vomited a little blood, later, which I was not able to say definitely, came from the stomach, anyhow, the man improved until the third day, when on rising from his cot feeling perfectly well, he was suddenly seized with severe abdominal pains, followed by collapse, at which time he vomited large quantities of blood and passed about 10 c.c. by bowel.

The natural supposition in a case of this kind was that there had been an injury to some hollow viscus, that possibly a haematoma had formed in the neighborhood of the first portion of the intestine and that there had been regurgitation of the blood into the stomach, some of which passed through bowels. On opening the abdomen I found it filled with venous blood. I examined all abdominal organs eventually locating injury on anterior surface of liver. It was evident that in this instance the parenchyma was ruptured without destroying the fibrous and peritoneal covering; being reinforced by contract with the thoracic cage with probable adhesions between the visceral and parietal peritoneum; the point of least resistance was through hepatic radicles into hepatic ducts thence to duodenum. Without a knowledge of the possibility of this condition ensuing, it would certainly be difficult to arrive at a clear conception of the organ injured, previous to exploratory incision.

In diagnosing kidney injuries it is not impossible that conditions may arise which will be misleading, as occurred in a case not heretofore reported in which large quantities of bloody urine suggested kidney rupture. Exploration showed that the ureter was partly severed at pelvic brim permitting blood to pass into bladder.

It is true, these are exceptional cases, but they serve to emphasize, first; difficulty in arriving at a correct conclusion based upon objective signs; second: the necessity of exploration, irrespective of any special symptoms, except that of shock.

Dr. A. J. Ochsner, of Chicago. This subject is certainly very interesting, and the position which Dr. Eisendrath has taken is the proper one. I feel that we can reasonably say that the position he has taken will stand.

With regard to the details of carrying out the idea which Dr. Eisendrath has proposed, I wish to say a few words. A systematic plan of examination is certainly to be commended, and when it comes to making an intra-abdominal examination, I believe a further step in the system might reasonably be introduced. Usually it is possible to determine whether the injury was on the right or the left side. There are cases, especially where a man is caught between the bumpers, where this is not possible, but usually one can determine it. Then if one follows the plan which has been suggested, he is reasonably certain that an injury of one or other intra-abdominal organ has occurred, with the exception of the kidney. The reason why we need not worry about the kidney is because, in the first place, it is retroperitoneal. There are two of them, and rarely are both injured at the same time, and one is quite sufficient. Again, they are far enough away from the small intestine to be reasonably free from sepsis; but let us suppose that injury has taken place, the suggestion of making an incision as nearly over the point of injury as possible is a good one, providing we limit it in this way, namely, make an incision which is capable of securing extensive inspection of the intra-abdominal organs, and at the same time leaving the abdominal wall in a condition in which it can be closed without too much prolongation of the manipulations. It must be remembered that these patients are already in shock.

Suppose the injury is on the right side. If we make our incision in the outer edge of the rectus abdominis muscle, high up, all we have to care for is that the incision is longitudinal, that we split the edge of the muscle, and when we have passed through the muscle we should bear in mind the location of the epigastric muscles, as by so doing we cause no injury. We can make the incision from the sternum down to the pubis, lay open the whole area, and be in a position to close it in a few minutes very readily. We are in a position in which we can

drain without the danger of hemorrhage by simply making a little slit in the muscle, passing through it a dilator, stretching the hole and inserting a drainage tube through it, and then sew up the abdominal wound, without danger of hernia, and without danger of prolonging the operation.

Suppose the injury is on the left side, the same thing can be done through the left edge of the left rectus abdominis muscle. We insert a drainage tube down in the manner I show you, and whatever fluid there may be will drift towards the drainage tube.

One more point as to system. I wish to refer to the examination of the small intestine. When we first suspect an injury of the small intestine, we always take a long time to determine the location of the injury, which is not right. There are two fixed points in the small intestine, one point to the left of the median line, directly underneath the mesentery of the transverse colon, and another one in the right inguinal region, where the small intestine enters the cecum. The more common point of injury is at the lower portion, so that if one should suspect an injury of the small intestine, he should begin low. He can run up and have the whole area examined without causing any great amount of traumatism to the structures. He need not make any unnecessary manipulation. He can make his manipulation very simple, so that it is unnecessary for him to traumatize any of the intra-abdominal organs in so doing.

One other point. When we get these patients late, at a time when peritonitis already exists, they are almost always hopeless, but if this one little principle is borne in mind by the practitioner who sees these cases early, the form of peritonitis could be limited very greatly, and it is this: Peritonitis comes from infection from the alimentary canal. The colon is rarely or never injured by crushing injuries. Infection does not come from the colon, but from the small intestine, consequently if in these cases the small intestine is kept empty from the first, infection would not be likely to occur, because the omentum would wind itself around the small intestine, and even if there were injury, it would not amount to much. I have had an opportunity to determine this in several cases, therefore in the cases of intra-abdominal injuries in which the physician does not feel competent to go in, although he has made an examination, and in cases in which a competent person is not available, this precaution should be taken: The stomach should be emptied as soon as there is regurgitation from the small intestine into the stomach; then the patient will still have a chance, although the proper treatment cannot be applied.

Dr. Denslow Lewis of Chicago. I desire to add a word of commendation and of appreciation for this excellent paper. Later in the session, with your indulgence, it will be my privilege to give some thoughts on immediate abdominal section, in which I shall hope to show the necessity for operation in the variety of injuries to which Dr. Eisendrath has called our attention. The statistics he gives are valuable and most suggestive.

If I understood Dr. Eisendrath correctly, he said that with prompt operation perhaps 90 per cent. of the patients who sustained these injuries can be saved, but without it 90 per cent. of them die. They show the value not only of accurate diagnosis, as far as that is possible, in this class of injuries, but they show more. They show even in such cases where the diagnosis is impossible it is advisable to make a laparotomy, because no one will say today that an aseptic abdominal section adds materially to the danger of the case. I think we can say in most of these crushing injuries, where the injury is sufficient to produce extreme shock, even if we do not diagnose internal hemorrhage, but an injury sufficient to fracture the pelvic bones, or a serious injury to the abdominal wall or the abdominal contents, is often accompanied by internal hemorrhage, which we cannot diagnose, and I think statistics show an increased experience will demonstrate in some instances that it is advisable to make abdominal section.

I have enjoyed the paper very much indeed. It is a class of paper we ought to have presented more frequently, and I wish to express my commendation of it.

Dr. J. R. Pennington of Chicago: I would like to ask Dr. Eisendrath to tell us in closing what the general practitioner is to do in such cases, or what pallitive or temporary measures he can utilize to advantage in case a man, for instance, is kicked by a horse.

Dr. M. V. Gunn, of El Paso, Ill. This is one of the most interesting papers I have had the pleasure of listening to, and it is one that comes directly home to the country practitioner. It puts every practitioner in close touch with these injuries, and points out how essential it is for the practitioner to carefully observe and study his cases, in which a trauma or violence has been sustained.

The essayist spoke of what the physician should do under the circumstances. My advice is that if I strongly suspicion an abdominal injury in any case, one of the first things I would do would be to call in a first-class surgeon, and do it as quickly as possible.

Dr. Eisendrath (closing the discussion.) In the first place, I desire to thank the gentlemen for discussing my paper, and presenting so many excellent points.

In reference to the remarks of Dr. Wiggins concerning the case of rupture of the liver in which a large quantity of blood was not only vomited, but passed through the bowels, I believe a possible diagnosis could have been made in the first forty-eight hours if he had adhered to this systematic method of examination. The large amount of venous blood which he found in the peritoneal cavity could have undoubtedly been detected, as in the spleen case reported. A point in the diagnosis is the presence of dullness in the flanks or the dependent portions of the abdomen in general. Of course, there are some cases in which it is not possible to do this and those are the ones in which the abdomen

is very rigid as the result of beginning peritonitis. But in the great majority of cases we can.

With reference to the suggestions made by Dr. Ochsner, I think they are exceedingly valuable, and were the ones which I carried out in both cases of rupture of the spleen. I have not been so fortunate as to have up to the present time a case of rupture of the intestine. However, if I should suspect such a case, I should certainly follow his suggestion, making an incision along the right border of the right rectus muscle, beginning at the ilium, and exploring it by the duodenojejunal flexure. If I suspected a rupture of the bladder, I would adhere to the median line incision.

In regard to the proposition of limiting as much as possible the extent of peritonitis, I believe that the best reply which I could give to Dr. Pennington's question is that it coincides fully with the view which I think ought to be encouraged, namely, that every general practitioner when he meets with a case of that kind and makes a diagnosis of intra-abdominal injury, or recognizes that there has been a rupture of the intestine or of the liver, the best plan for him to follow is this, that if he suspects an intestinal injury he should wash out the stomach and place the bowels at rest by the method suggested by Dr. Ochsner in appendicitis, which is an extremely valuable thing to do. In addition to that it would be well to place an ice bag over the region of the spleen, the liver or kidney, and administer internal small doses of ergot, giving food *per rectum* only. Then, as soon as possible, transport the patient either to a hospital, or call in some surgeon, as has been suggested by Dr. Lewis, and the preceding speaker, to aid in the diagnosis and treatment of the case. It is much better to do a laparotomy, even though one finds nothing except a slight omental lesion or something of that kind, than to undertake laparotomy when there is not one chance in a hundred of success.

TUBERCULOSIS OF THE NERVOUS SYSTEM.*

BY JULIUS GRINKER, M. D., CHICAGO.

In view of the great interest that is recently being given to the tuberculosis question, I consider it timely to review some of the commoner forms of tuberculosis of the nervous system. The subject, however, is too extensive to be compressed in a half hour's discourse. I shall, therefore, confine myself principally to diagnosis.

Tuberculosis of the nervous system is almost always secondary to tubercular disease in some other organ. It sometimes appears to be primary, especially when it affects robust individuals, and it would seem from the reports of reliable observers that a few cases of primary tubercle of the brain have been seen. Possibly even in these cases the primary source of infection has been overlooked, as a most careful search is often required to detect the primary depot. The joints and bones, the kidneys and lungs, the peritoneum and intestines, must be investigated, besides the various glands in the body, some of which are inaccessible to direct examination. That the nose and ears, through the naso-pharynx, constitute avenues of infection is daily becoming more evident; it has also been stated that bacilli may pass through the lungs without leaving obvious recognizable lesions. The wonder is that there are not more cases of brain tuberculosis in the presence of so many opportunities for its development.

Brain tuberculosis occurs either as an affection of the membranes, or in the form of the so-called solitary tubercle. The latter name is really a misnomer as tubercle appears multiple in many cases. According to Allen Starr, tubercular tumors constitute the great majority of all tumors of the brain and occur with greatest frequency in childhood. They vary in size from a pea to a hen's egg, and their place of predilection seems to be the posterior fossae. Thus, we often find them in the substance of the cerebellum, the pons and medulla. For this Bruns finds an explanation in the frequent tubercular affection of the deep cervical glands, which are certainly more closely connected with the cerebellum and pons than with the cerebrum.

The *symptoms* of tubercular tumors of the brain do not differ essentially from those of other forms of tumor and it is not my intention to enter into the symptomatology of cerebral neoplasm. However, the following points of difference, according to Allen Starr, might be emphasized: Tubercle may remain latent for a long time and tuberculomata have been discovered post-mortem that never caused symptoms during life. Remission in all the symptoms for appreciable periods of time belongs to tubercular tumors; also the

*Read at the meeting of the Chicago Medical Society June 1, 1904.

preference for the posterior fossae and the tendency to appear multiple. The latter fact accounts for the diversity of symptoms found in tubercular tumor, which is not commonly observed in the other varieties. A localized meningitis may give rise to the same symptoms as a small tumor and differentiation be impossible. A gradual subsidence of symptoms with recovery points to meningitis rather than to tumor.

Of the membranes of the brain the dura is but seldom the seat of tuberculosis and only when a disease-process extends thither from the overlying bone or from the underlying soft membranes.

Tuberculous Leptomeningitis. The symptoms do not differ from meningitis caused by other germs, except that the onset and course are more gradual and have a somewhat milder aspect, although the event appears to be uniformly fatal. In the tubercular variety of meningitis the base of the brain is most frequently affected and there is usually a rapid development of inflammatory exudate in the ventricles. The disease seems to affect with greatest frequency children from 2 to 12 years of age. The reason may be that the primary sources in the way of scrophulous or tubercular glands are commonly present in children, while in older persons glandular and bone tuberculosis is comparatively rare.

Briefly reviewing the pathological changes of tubercular leptomeningitis, we may emphasize the fact that they are mostly localized at the base of the brain; about the optic chiasm, the interpeduncular space, in the Sylvian fissure; also about the pons and medulla, hence it is often called basillar meningitis. The tubercular nodules seem to follow the pial vessels and to surround them. In addition a turbid exudate spreads into the meshes of the pia-arachnoid. Leucocytes also infiltrate the arachnoidal spaces and the tissues of the pia. Fibrinous threads and large epithelioid cells are often found. The tubercular nodules infiltrating the vessels and walls undergo caseation rapidly, even if the disease has been of but a few days' duration. By way of the vascular sheaths the process may extend to the superficial layer of the brain. Caseation leads to rupture of blood vessels with small hemorrhages into the brain tissue causing destruction of brain substance. We then have in addition a cerebritis and the entire process may be called a meningoencephalitis. By means of the choroid plexuses, which are continuations of the pial vessels into the ventricles, we have an extension of the disease into the ventricles with resulting granulations of the ependyma. These may often be recognized by the naked eye to be miliary tubercles. Microscopically they invariably show typical tubercle structure in which bacilli can also be demonstrated. The ventricles often become filled with a turbid exudate which distends them enormously, causing acute hydrocephalus and symptoms of pressure. Bearing in mind these few pathologico-anatomical data we can easily reason out some of the otherwise perplexing symptoms of the disease.

Tubercular leptomeningitis has been divided into several stages, but as a matter of experience there is no sharp and dividing line between any of its stages. As a rule the child's health has been failing for some time. There has been a change of disposition with marked depression. The child suddenly will stop in its play, run into a corner or hide itself behind the mother's apron, put its hand to the head and groan with pain. The tendency to hide from the light and noise may even thus early be an expression of the oncoming hypersensitiveness of the special senses. The sleep may be disturbed by wild dreams and is restless; there may be grinding of the teeth and shrill outcries. Slight cough, some wasting and general ill-health may have been noticed previously. Some fever, headache or vomiting may have been observed; perhaps there are some convulsive twitchings. At this stage a diagnosis may be impossible. One will think of simple fever, gastro-intestinal disturbances, typhoid fever and a variety of other conditions. It is well to bear in mind the possibility of tubercular meningitis in all cases where we find glandular enlargements and unhygienic surroundings. The family history must be carefully probed for a tendency to tuberculosis and the personal history

of the patient must not be neglected. Particularly will we inquire for the previous existence of whooping cough and measles, as we know these diseases to especially favor tubercular brain disease.

Somewhat later in the course of the disease the diagnosis is not so difficult. There may occur an optic neuritis, or tubercles may be seen upon the choroid. The so-called "hydrocephalic cry" may be present, viz.: the child while asleep utters a most piercing cry which calls the mother to the bedside, who thinks the patient in agony and finds the child slumbering quietly or having slight twitchings in the facial muscles with, perhaps, a frown upon its forehead. In olden times every frown in a child was considered characteristic of brain mischief, which was of course a mistake. The head may now be retracted and show well-marked rigidity when passively flexed. This symptom is attributed to the extension of the disease over the medulla and later to the cervical cord membranes.

At this time involvement of the cranial nerves at the base of the brain gives symptoms of irritation, such as twitchings in the face or in the ocular muscles, perhaps vagus-accessorius involvement, Cheyne-Stokes respiration, a slowing of the pulse, irregular fever, boat-shaped abdomen, projectile vomiting and a multitude of other symptoms. We may have hemiplegia, monoplegia, or a unilateral convulsion. Most of the above mentioned symptoms are said to belong to the stage of *irritation*.

Following this there may be a remission of all the symptoms and parents and physician may give themselves up to the sweet delusion that the patient is improving, for he is sitting up and playing the same as usual. But this temporary improvement is only too often a signal for the onslaught of the last, fatal act of the disease, called the *paralytic* stage. The symptoms at this time are due to destruction of tissue, whereas in the previous stage there was irritation and pressure. Now we have ocular paralysis, strabismus, hemiplegia, relaxed sphincters, irregularly dilated pupils. The child, instead of tossing about, has become quiet, has developed distinct Cheyne-Stokes breathing and enters the stage of coma from which it never wakes. High temperatures and convulsions may close the sad scene.

Such, in general, is an outline of the disease which is considered fatal almost without exception.

An analysis of the symptoms of tubercular meningitis will enable us to divide them into *general symptoms*, caused by pressure, and *focal symptoms*, caused by direct implication of nerve-tissue.

Among the *general* symptoms must be mentioned: headache, fever, vertigo, vomiting, slow pulse, disturbance of the respiratory rhythm, jactitation, convulsions, hyperaesthesia, delirium, coma, involuntary sphincter-action. As standing on the border line between general and focal symptoms may be regarded the trismus, grinding of the teeth, rigidity of the neck muscles and spasticity of the extremities.

Headache is a very constant symptom and may be caused either by direct pressure of the exudate upon the nerve-filaments of the dura, or else, indirectly, by the fluid from within the ventricles.

It was found by experimenters that pressure in the brain of 70-80 m.m. Hg. gives rise to *pain*, while a pressure of 80-100 m.m. Hg. gives rise regularly to *convulsions*. These are most likely due to anemia of the motor areas and are consequently analogous to those seen in animals bled to death. The convulsions occur before the slowing of the pulse has taken place. A still greater rise of brain-pressure causes a *retardation of the pulse* which is rarely absent in meningitis, particularly in the beginning, and is probably due to stimulation of the vagus centre in the medulla. When pressure becomes still greater, as it usually does in the last stages of meningitis, the pulse becomes rapid and irregular, owing to paralysis of the vagus centre, and this is usually of fatal omen.

Respiration loses its regular rhythm rather early in the course of the disease and is the result of a moderate amount of brain pressure; when the pressure rises still higher and

when coma has already supervened, respiration is deep and slow; and when the pressure has become still higher and if the retarded or vagus pulse comes on, respiration becomes irregular and at times ceases altogether. When in the further course of the disease vagus paralysis manifests itself by the acceleration of the pulse, the respirations become labored (Cheyne-Stokes) and finally cease.

The *clouding of the sensorium* is probably also produced by pressure on the cortex. *Vertigo* and *vomiting*, particularly when the patient is placed in the upright position, may be attributed to an increase of intra-cranial pressure acting upon cerebellum and pons.

The *pupillary anomalies* may be caused by pressure on either the cortical or the nuclear centre of the oculo-motor nerves. When a difference in the size of the pupils is observed, either the centre or the nerve-trunks are unequally involved in the exudate.

The *optic nerve* derangements, such as optic neuritis, etc., so commonly observed in tubercular meningitis, may be explained by the accumulation of fluid in the third ventricle, causing pressure upon the optic chiasm from above, or else by direct involvement of the optic nerves.

The *rigidity* of the neck muscles is probably caused by irritation of the nerves supplying them, through meningeal thickenings, or by pressure from a distance.

Into the same category, as having similar causes, might be placed the *trismus*, *grinding of the teeth*, and the *scaphoid abdomen*, which symptoms are all produced by spastic contraction of muscles.

Besides these motor symptoms there is *hyperaesthesia* of skin and muscles, also of the special senses, such as photophobia and intolerance to noises.

The *reflexes* are exaggerated in the beginning of the disease, later they are either reduced or entirely absent. The Kernig sign is often present either unilaterally or bilaterally. Only its presence is of diagnostic value.

The *Kernig Sign*. In meningitis, according to Kernig, if the hip be placed so that the thigh is at a right angle to the body, the knee may not, without undue force, be extended in some cases beyond 90°, never to the point of full extension and not farther than about 135° or 140° in any case. With the hip extended, the knee may be readily straightened. Thus, the ability readily to extend the knee, when the hip is flexed at a right angle, would speak strongly against the presence of meningitis. This sign is supposed to depend upon inflammation of the meninges and consequent irritability of the nerves, which is increased by the stretching of the lumbar and sacral roots when the individual is in the sitting posture, so that the attempt to extend the knee is sufficient to provoke reflex contracture of the flexors of the leg. Such reflex contracture is not produced by extension of the knee when the thighs are extended upon the pelvis.

Vasomotor disturbances are common, so that a light stroke upon the forehead or chest may leave a red streak for some time. This is the so-called *tâche cérébrale* of Trousseau, which was formerly regarded as pathognomonic of tubercular meningitis, but we now know that it occurs in other nervous diseases.

Focal symptoms are caused by the accumulation of tubercles in certain cortical areas with subsequent destruction of brain-substance and by direct involvement of the cranial nerves. Most important of the focal symptoms are the cranial nerve paralyses, especially that of the third, strabismus, pupillary differences, myosis or mydriasis. Hemiplegias and aphasias that are occasionally met with, may be due to thrombotic blocking of the blood-vessels or to tubercular deposits pressing on the cortical motor areas. Tubercles in the choroid, when present, are of the greatest diagnostic import.

In typical cases the diagnosis is usually easy, but there are atypical cases that are most difficult to diagnose. It is in these cases that *Quincke's lumbar puncture* offers a diagnostic measure of the most useful kind. Although originally recommended for therapeutic purposes, this method has of late come to be utilized more often in diagnosis. It consists in obtaining a small amount of cerebrospinal fluid by

means of a puncture through the spinal membranes and subjecting it to a chemical, microscopic and bacteriologic examination.

The *technique* is as follows: The patient is preferably placed in the recumbent posture on the left side, with the body strongly flexed in the lumbar region. The puncture may be made with a long aspirating needle between the second or third or the third and fourth lumbar vertebra, either in the median line or a few millimeters outside of it. If the puncture be made in the median line, it should be at the mid-point between the spines in children. Fluid will usually be reached at a depth of 2 cm. In the adult the puncture should be made at a point opposite the middle third of the lower border of the spine above, on account of the downward inclination of the spines, and the needle should slope towards the median line so as to avoid injuring some twigs of the cauda equina which are situated more laterally. The fluid, which is reached at a depth of 6 cm. in the adult, should not be aspirated, but allowed to flow gently into a previously sterilized vessel. No anaesthetic is required. An ethyl-chloride spray might be advantageous. Of course perfect asepsis must be observed. For diagnosis only a small amount of fluid is required.

The normal pressure is, according to Quincke, 40-60 mm. water, though he only considers an increase to over 150 mm. to be pathologic. Under some pathologic conditions the pressure may increase to 700 mm. Roughly, we can estimate the pressure by the rapidity of the flow, so that if in a short time 30-40 cm. of liquid escape we conclude that there is a pathologic increase. The increase of quantity and pressure occurs under various conditions, especially in cerebral tumor, tubercular and serous meningitis, chlorosis, œdema of the brain.

From the physical appearance of the fluid alone we can often make a correct diagnosis.

The fluid is cloudy in purulent meningitis. It may also be cloudy in the tubercular variety. A purulent condition is especially characteristic of the different forms of purulent meningitis. If no pus appears to be present, the polynuclear leucocytes will sometimes reveal a purulent condition. In tubercular meningitis the lymphocytes predominate, while there may be few polynuclear leucocytes present. The freezing-point of cerebrospinal fluid from tubercular meningitis is lower than that of normal liquid.

The bacteriologic examination is extremely important. We may find streptococci and staphylococci in purulent meningitis, pneumococci and the meningococcus intracellularis of Weichselbaum in epidemic cerebrospinal meningitis, tubercle bacilli in tubercular meningitis, especially in the flocculi. It may be necessary to centrifuge the fluid. If the fluid be sterile, we occasionally get positive results when cultures are made.

Occasionally sterile cerebrospinal fluid injected into a rabbit or guinea-pig develops typical tubercle. It is certainly of advantage to use lumbar puncture in any doubtful case, as the diagnosis can in this way often be definitely settled when other means fail. In the majority of instances, however, a lumbar puncture is only confirmatory of the diagnosis previously made.

In my opinion lumbar puncture is not resorted to often enough in private practice; while physicians no longer hesitate to use an aspirating needle in the pleural cavity, the insignificant operation of a lumbar puncture is still looked upon as a grave procedure.

In doubtful cases a *blood examination* will often decide the diagnosis between a *purulent* and a tubercular meningitis. According to Grawitz and Tuerk, there is a leucocytosis in the purulent variety and only slight increase of leucocytes, if any, in tuberculosis.

Tubercular meningitis is under certain circumstances easily mistaken for cerebral tumor. Of course this is not likely to occur in the ordinary form of tubercular meningitis with acute hydrocephalus which runs a course of from 4 to 6 weeks. But there is a variety of tubercular meningitis, according to Allen Starr, in which the diagnosis from tubercular tumor is impossible, the symptoms being so similar. The following, however, may serve as differential points. Headache is more severe in meningitis and more continuous. There is greater hypersensitiveness to

light, sound, or touch in meningitis, and optic neuritis develops less frequently, less rapidly and with less intensity than in tumor. Tubercles upon the choroid are found more frequently in meningitis than in tubercular tumor.

Caries of the Spine. Considering the frequency of Pott's disease of the spine it is perhaps surprising that so few cases present symptoms of cord disease. Pathology offers a satisfactory explanation. If the spinal dura becomes involved at all, the tuberculous deposit occurs between bone and dura mater, producing a pachymeningitis. In many of these cases the dura mater itself protects the cord from direct infection, as its inner surface usually remains smooth and clean. Occasionally, however, all the membranes of the cord are fused into a dense mass and cause compression of the cord. We will then have an ischaemia, a lack of general nutrition at the point of pressure and later, perhaps, secondary degenerations. As is well known, pain and tenderness on pressure over the affected vertebra are early symptoms. The slightest jar increases the pain and the spine is held rigidly extended, in order to prevent movement of the diseased bones upon one another. Later, kyphosis and burrowing abscesses may develop. When the dura is involved so that the cord is compressed, we will have disturbances of sensation and of motion, and the well-known picture of compression myelitis, or spinal meningitis, if the membranes only are involved. Many a so-called intercostal neuralgia was only a symptom of compression of the posterior dorsal roots by a tubercular infiltration.

Tubercular spinal meningitis without cerebral meningitis is extremely rare, except secondarily to disease of the vertebra.

Solitary tubercles are occasionally found throughout the cord, but the usual form is a caseous mass within the cord which subsequently extends from within outward.

Multiple Neuritis of the most aggravated type has been observed in tuberculosis. These patients who are *in extremis* with wasted bodies and cavities in the lungs can barely be touched and suffer most excruciating pains. They often beg for morphine or death.

Functional Nervous Disturbances Due to Tuberculosis. Normally our state of feeling is a correct index of the state of our physical condition. In tubercular patients this is often reversed. Even the old physicians have long ago recognized the general hopefulness in the phthisical. Patients who are coughing and spitting, sweating and suffering from colliquative diarrhoeas, will tell the doctor, that if they could only get rid of their cough, they would be well again. This so-called feeling of euphoria is so common in the tubercular that it is believed by some to be one of the symptoms of phthisis.

As regards the *neuroses* it cannot be denied that the relation between tuberculosis and the so-called functional neuroses is too close to be a mere coincidence. Even if we do not accept Dr. J. Mays' theory, that tuberculosis is a nervous disease, we cannot ignore the fact that in some families phthisis seems to be displayed by the neuroses among some members. "Thus, for instance, in a tubercular family we see, of the children, one dying from tubercular meningitis, another has the ordinary lung trouble, a third may escape altogether, the fourth may be neurasthenic, hysterical, or even a lunatic. According to Prof. Gasset, the last escaped the diathesis in appearance only. He is tubercular like the rest, though he has no tubercles anywhere. It is his neurosis which represents the diathesic affection." Whatever we may think of this hypothesis, it is certain, however, that a history of tuberculosis is often found in the family or personal history of those affected with the neuroses.

That insanity and tuberculosis frequently occur in one individual has been proven by large asylum statistics. Kraepelin, the great German alienist, says: "In tubercular patients we often see acute insanities with confusion, hallucinations, delusions, depressed or exalted moods, insomnia and excitement, which resemble the acute exhaustion psychoses of typhoid and articular rheumatism. Considering, however, the rare occurrence of phthisical insanity we may assume the psychopathic predisposition to play an important part in the etiology. In some instances alcohol, so frequently taken

by tubercular patients, may be the important etiologic factor. Finally, meningitic processes may cause the nervous and psychic states of irritation."

Among the first symptoms of these tubercular insanities is excessive irritability and suspiciousness quite unnatural to the individual. The patient may for a long time be considered nervous, until tuberculosis is disclosed by careful examination. The obstinate refusal to take food, which is common among these patients owing to their delusions of poison, may have its anatomical explanation in irritation of the pneumogastric filaments, the nerve that supplies the stomach as well as the lungs.

The prognosis is fatal in those young subjects who develop phthisis slowly but surely, who present on the physical side emaciation, haemoptysis and diarrhoea, and obstinately refuse to take food for fear of poisoning. It is also a matter of record that tuberculosis kills a large percentage of insane patients.

It appears almost superfluous to state that the prognosis of tuberculosis of the nervous system is extremely unfavorable.

Under *Treatment* I would say, paradoxical as it may sound, the treatment is the *diagnosis*.

Let us hope that the movement for the prevention of tuberculosis, which is at present raging in an epidemic form, both here and abroad, may accomplish something in the way of prophylaxis. In the meantime it is the duty of every conscientious physician to have a sharp outlook over every possible avenue of infection in the human body and to engage in combat with the enemy long before it has reached that inner citadel, the frail human brain.

1106 Reliance Building.

Dr. A. J. Overhalt a former resident of Taylerville, died suddenly at his home in Solida, Colorado. He was in his 65th year.

Heard After Meeting.

"I got a idea," said Brother Williams, "that we kin all make heaven on earth."

"Don't you tell dat ter de congregation," said Brother Dickey. "I done bought an interest in a undertakin' establishment!"—Atlanta Constitution.

SOME REMARKS ON TUBERCULOSIS IN CHILDREN WITH REPORTS OF TWO TUBERCULOUS AND TWO NON-TUBERCULOSIS CASES THAT ILLUSTRATE POINTS IN DIAGNOSIS.*

BY ROBERT H. BABCOCK, M. D., CHICAGO.

Instances are so numerous in which I am called on to examine young children suspected of being tuberculous that I have decided to emphasize a few facts which although well known appear not to be generally remembered by physicians when requested to pass on the condition of a child's lungs.

That tuberculosis is of frequent occurrence in children under ten years of age is plainly shown by statistics. Thus according to Cornet, Simonds, Schwer and Bolz found out of 2,447 autopsies on children under ten years, dead of all diseases, 362 instances of tuberculosis, or 22.93 per cent. Divided up into smaller periods the figures were as follows: 4.5 per cent were tuberculous under one year; 20 per cent from 1 to 5 years and 35 per cent between the ages of 5 and 10. Mueller's percentages likewise given by Cornet are as follows: Of 426 autopsies under the age of ten 115 or 23.36 per cent were tuberculous, and of these 6.1 per cent fell under one year; 26.8 per cent from 1 to 5 and 37.2 per cent between the ages of 5 and 10.

Jacobi states that in ten hundred and forty-five autopsies made in the New York Foundlings Hospital (Northrup) and the Babies Hospital, "tuberculosis was found in fourteen per cent: altogether one hundred and nineteen cases." These and similar statistics demonstrate the frequency of tuberculosis in infancy. "From the first to the fifth year it is the same."

Holt states that of 500 autopsies on children in Munich, Mueller found 40 per cent tuberculous, a higher percentage, Holt thinks, than exists in this country, as shown by the statistics cited by Jacobi.

The relative frequency with which the various organs are affected is also interesting and

---

*Read at the 54th Annual Meeting, May 17, 1904.

instructive. Not to weary you with figures it may be stated in a general way that in young children the primary seat of tubercle is in the bones, joints and lymph glands (Jacobi). That the lungs eventually become affected is shown by Holt's figures, viz.; of 119 autopsies the lungs were involved 117 times. This is accounted for by the fact that the lungs become diseased secondarily to tuberculosis of the bronchial glands (Fraenkel et al). In a general way, it may be stated that the organs most frequently presenting clinical evidence of tuberculosis are the lymph nodes (bronchial, cervical and mediastinal) the lungs, the cerebral meningies and the intestines, liver, spleen and kidneys being also frequently involved because of the great frequency of miliary tuberculosis.

In infants, especially under one year, the disease manifests itself by symptoms closely resembling marasmus, and if the lungs become involved, it is secondary to tuberculous invasion of the lymph nodes and in consequence of the antrum of infection being in the intestinal tract. This consideration, together with the observation that the disease invades the lungs through the bronchial glands, at once raises the vexed question concerning the mode of invasion. Jacobi and Brügge, express the belief that the lungs most often become tuberculous through aspiration of bacilli and cite the involvement of the bronchial glands in proof thereof.

Behring on the contrary maintains that the germs gain access through the intestinal tract, consequently by the food and not by respirated air. The infection may remain dormant for many years and declare itself after the individual has suffered a reinfection. His opponents argue that were the intestines the avenue of entrance bacilli should be discovered in them, which they never have been. Ravenel's experiments on fasting dogs, however, appear to prove conclusively that tubercle bacilli may be absorbed from the intestines and pass directly into the chyle and mesenteric lymph glands, leaving the intestinal walls free.

By whatever route the bacilli reach the bronchial and intra-pulmonary lymph nodes, it is the fact of their predominant involvement in young children, which explains the clinical appearances.

Under the age of 7 and especially 5 the bronchial glands are the chief and according to Fraenkel the earliest seat of the affection. From here out, favored by inflammatory adhesions of the pleural surfaces the disease spreads, not to the apex as in adults, but to the middle portion of the lung and to the lower lobe.

Involvement of the lower lobe is sometimes brought about also by penetration of a bronchus by a caseous gland, and the aspiration of its cheesy contents into the lower portion of a lung. The preference of the tubercular process in young children for the parts of the lung surrounding the hilus is explained in part by Birch-Hirschfeld by the fact that in them the direction of the bronchus leading to the apex is less vertical and that the greater mobility and elasticity of the thorax favors more energetic respiratory movements, and hence better ventilation of the apex. Certain it is at all events, that in children under 7 and still more under 5 the apices are not the areas of predilection in which to look for changes due to tuberculosis.

Relative to this recognized fact Jacobi says in effect that when dullness and bronchial breathing are found at the apex of a young child, they are generally due to a chronic interstitial thickening, which dates back to some former attack of bronchitis. Accordingly, when pulmonary tuberculosis is suspected in a child of tender years, it is not the apex to which attention is to be especially addressed, but the bronchial gland area, situated at the back between the second and fifth dorsal spines, the middle lobe on the right side, the middle portion of the left lung and both lower lobes. One is also to study the condition of the lymph glands, in particular the cervical and mediastinal, and to look for localized or unilateral diminution or suppression of breath sounds which may suggest caseation of some of the intra-pulmonary bronchial nodes and compression of a bronchus.

This investigation of the lymph glands is of the utmost importance since tuberculosis

of the lungs in these young patients is in the overwhelming majority of cases, secondary to glandular tuberculosis.

Another consideration of the very greatest clinical significance is the liability of young children ot miliary tuberculosis either acute or sub-acute, in which cases the pulmonary signs are very apt to be those of general bronchitis with obscure areas of broncho-pneumonia. In these instances the lymph nodes are the first affected from these. Bacilli, are either discharged directly into the blood vessels through perforation of their walls or are carried by the lymph stream into the duct and by means of it throughout the body.

From the foregoing it is clear that the clinical picture of tuberculosis in children below the age of 5 and perhaps 7 years is likely to be different from that of the adult. The lungs are not the organs primarily affected and hence when these present signs of tuberculous disease, it may be regarded as a comparatively late manifestation of the tuberculosis. I also wish to repeat for the sake of emphasis, that when pulmonary tuberculosis is suspected in children of tender years, examination should not be confined to the apices but must include careful investigation of the middle and basic parts of the lungs and the various lymph nodes so far as they are accessible to examination.

Case 1. In December, 1903, Dr. Kaiser, of Somonauk, Ill., brought to me a farmer's daughter of 7 years, who presented symptoms, that rendered him suspicious of tuberculosis. The child had had pneumonia in the January preceding and since then had not been well. She had especially run down during the fall. The symptom which gave especial uneasiness to the mother was cough, which it was stated, was very troublesome at night. The expectoration, if any, was swallowed.

Examination showed a well nourished girl without fever or respiratory embarrassment. She had a small bunch of adenoid growths and the cervical glands beneath the inferior maxilla were enlarged and indurated. Other glands of the left side of the neck were palpable but small. There was no dulness in the bronchial gland area between the second and fifth dorsal spines. Pulmonary resonance was impaired in the right supra-scapular region at the left apex both above and below the clavicle and at the left base outside of the anterior axillary line.

Over these areas the breath sounds were harsh and intensified somewhat, but not distinctly bronchial and there were no rales. In view of the mother's statement that the child had seemed to take cold a week or two before, I was unwilling to pronounce the disease tuberculosis and advised certain treatment consisting largely of open air and the return for another examination if improvement was not satisfactory.

The fore part of April Dr. Kaiser brought the child back with the statement that she had seemed to improve for a time but had shown distinct failure during the past two weeks. Examination now disclosed increase of dullness with bronchial breathing at the right apex behind, slight loss of resonance at the right posterior base, somewhat increased dulness at the left apex and at the corresponding base posteriorly, a considerable patch of pronounced dulness with diminution of breath sounds. No definite rales were detected. The liver was palpable for a distance of about an inch below the costal margin, and I thought I was able to detect the tip of the spleen. Otherwise the abdomen was negative, tenderness not being presented and no lymph nodes being appreciable. A small amount of sputum was obtained and showed two tubercle bacilli. Temperature was 99.9 F.

These findings placed the nature of the case beyond question. It was one of early pulmonary tuberculosis, but what was the mode of lung involvement? Was the primary infection glandular and that of the lungs secondary? Or had the lungs been primarily invaded through inhalation of bacilli, as Brügge, Jacobi and others believe is the case in opposition to von Behring?

The situation and distribution of the pulmonary signs seem to be contrary to the latter view. In the adult the upper lobe first becomes affected and the process extends from there downward by predelection along the inner borders and down the back more

markedly than in the front. In this instance the areas were scattered, the right apex and right base behind, the left apex in front, and the base of the left lung laterally and behind being the areas showing signs of involvement. On the whole therefore the path of invasion seems to me to have been through the lymph channels.

Case II. Quite different, however, is the case of a thirteen-year-old Jewish girl recently brought to me by Dr. Josephson, of Chicago. This child had been seen by the doctor because of several haemoptyses and a few days thereafter was presented in my office. In this instance there was extensive and pronounced infiltration of the left upper lobe both front and back as shown by dulness and bronchial breathing. Near the right base in front and behind was impared resonance with diminished broncho-vesicular respiratory murmur. Definite rales were wanting and the temperature was not much elevated. Superficial glands were not much enlarged and there was no dulness in the bronchial gland area.

In this case I am inclined to attribute the slight changes at the right base to aspiration of blood perchance during the haemoptyses, or of bronchial secretions and not to regard them as indicating the glandular mode of infection. This child is old enough to have passed out of early childhood and therefore would be likely to present changes in the lungs similar to such as are seen in the adult.

The next two cases are narrated because their contrast to the foregoing ones appear to me especially instructive. They illustrate also the necessity of a careful history and of a due appreciation from the standpoint of diagnosis of the pathology of tuberculosis in young children.

Case III. Feb. 1, 1904, I saw in consultation a slender boy of 7½ years whose father, a physician, feared tuberculous disease of the lungs. The boy may be said to inherit a predisposition to the disease and had a bad chest development, being narrow chested and stooped. A few weeks previous he had had a sore throat, fever and other symptoms, thought at the time to be grippe. After confinement to the house for a short time, he had again gone to school, been taken with an aggravated recurrence of symptoms and for a second time been kept at home.

At the date of my examination he was still showing a slight temperature from 99 and a fraction to 100 and a few tenths. He had a slight cough and showed impaired resonance with roughened breath sounds in the left intraclavicular and right supraclavicular regions but not in the bronchial gland area or at the inferior parts of the lung. The submaxillary lymph glands were distinctly indurated, while the cervical and other superficial glands were not palpable. This circumstance taken in connection with the absence of dulness in the bronchial gland area and the history of a recent throat infection lead me to pronounce the slight lung findings not due to tuberculosis but to the bronchitis which had attended the attack of grippe.

A week later I again examined this boy and ascertained that the dulness previously discovered had nearly disappeared, while the temperature did not run above 99 in the afternoon and the throat symptoms had grown manifestly less pronounced. In this improvement therefore was found a corroboration of my opinion that the lad was not suffering from tuberculosis.

Case IV. In January, 1903, a boy of seven years was brought to me from Ohio for diagnosis and advice because of the opinion expressed by a physician in Cleveland that the child was suffering from tuberculosis of the bronchial glands. The boy was well nourished and did not look ill. He had been carefully reared, spending much time in the open air, but had had a good deal of illness in the previous three years. In the summer of 1900 he had had an attack of abdominal pain followed by a high fever which lasted for a few days and was not understood. The next summer he experienced a similar attack which from the character of fever was pronounced malarial and was treated with quinine. In September, 1902, the boy had a third attack of fever which was ushered in by an obstinate diarrhoea, that did not yield to treatment for three weeks. The fever persisted for two weeks longer and was characterized by sud-

den and marked exacebrations and remissions.

The boy was then taken to Cleveland where examination of the blood for the plasmodium proved negative, but a slight nephritis was discovered. On this account he was sent back home and put on a diet chiefly of milk. In December he was again taken to Cleveland and kept under observation in a hospital. His temperature chart at this time showed a low grade fever which varied from 99 or occasionally 98.4 in the morning to 100.4 and on a few occasions 101 in the late afternoon or evening. Two injections of tuberlin were then administered of which the first was thought to give a slight reaction, whereas the second, of double the dose of the first, failed to show any reaction. Nevertheless the physician expressed the opinion that the child had bronchial gland tuberculosis and should have a change of climate.

My examination disclosed a slight temperature by rectum of 100.2, a leucocytosis of 8700 and 9000, perfectly normal lung findings, no dulness in the bronchial gland area, no induration of superficial glands, no abnormal changes of urine and no fermentation of the faeces, but in the right iliac fossa a small body was found which was unmistakably sensitive to palpation, while the abdominal parietes above it, were slightly rigid. This finding was corroborated by Dr. Bayard Holmes who was asked to see the case. It should also be added that this surgeon examined the accessory nasal sinuses and found these perfectly clear to electric light.

Based on the folowing consideration the diagnosis was made of chronic appendicial inflammation and infection and not tuberculosis of the bronchial glands. These considerations as already mentioned were: (1) the history of attacks of fever and abdominal pain suggestive of some acute abdominal disorder; (2) the persistence of some infection as evinced by slight temperature and slight but distinct leucocytosis; (3) no changes in the lungs; (4) no dulness over the location of the bronchial glands, i. e. in the interscapular regions between the second and fifth dorsal spines; (5) a state of good nutrition.

The history was of utmost importance and significance, but I was especially struck by the boy's appearance which was that of health and by the slight increase of leucocytes, since in tuberculosis such an increase does not take place. He was plump and of fairly good color and not at all emaciated as one would expect in a child suffering from glandular tuberculosis.

It may be stated that my diagnosis was amply confirmed by the subsequent history. Dr. Holmes ultimately operated and removed a large, long, chronically inflamed appendix, while in the late autumn of the same year the father wrote me that he believed the diagnosis and operation were both fully justified by the subsequent state of the child's health.

THE MENTAL DISORDERS OF NEURASTHENIA.*

BY FRANK PARSONS NORBURY, M. D., JACKSONVILLE.

The clinical study of neurasthenia must include in its scope the morbid psychology of the disease, for without it we fail to apply "the reign of law" in mind, in disease, and in consequence the analytical inquiry into the very fundamentals—the essentials— of mind showing the different strains of conduct, thought and feeling, are overlooked.

Pathology of will is a prime essential in the study of neurasthenia. The allied emotions; the sphere of the imagination; the sympathies of mind and body, all of the disturbed mechanisms of the mind, in fact, must be understood before we can grasp the full importance of the problem before us.

There is a physical basis to all mental life and neurasthenia, while not always within the borders of a true psychosis, nevertheless, is properly studied as a mental disorder and has a true physical basis in the physical disorder upon which it is founded. Unfortunately, the true merits of the psychological factors entering into the clinical study of neurasthenia, are not fully appreciated by

*Read at the 54th Annual Meeting, May 17, 1904.

physicians in general, as a result the differentiations in diagnosis are not made; in fact, too frequently, the disease is, more often, not recognized at all.

In dealing with mental phenomena, physicians, as a rule, seek for something tangible; some one symptom to which they can tie. When they attempt to deal with the varied mental symptoms of neurasthenia, it is, to them, more or less, an excursion akin to a flight into the realms of transcendentalism, instead of the study of an abstract clinical proposition. We must not forget that there is more in psychology than the mere academic discussion of the emotions, volition, etc. Further, if we wish to know the mind in disease we must know of its organic roots, study them, just as we study their natural phenomena. The neuron theory, with its range of possibilities, is being applied to the study of morbid psychology, but until we can apply it to the complete study of the human nervous system and understand the arrangement of the neurones underlying the various functional nervous processes, our knowledge must be limited. Barker says, "we have gained, it is true, important clews concerning the individuality of mechanisms, the successive complications of nervous phenomena." The future of this inquiry is very promising. The advent too of improved psycho-physical methods of study, requiring patient scientific work, brings us more in touch with the mind in its relationship to the brain, (the organ of the mind) and offers for the future of experimental psychology a definite place in the field of scientific inquiry.

The trend of modern neurological thought is, as Dana expresses it, in a paper read before the Boston Neurological Society, toward "The Passing of Neurasthenia," and assigning at least 50 per cent of cases now designated neurasthenia, to the group of the psychoses calling the cases—Neuro-psychoses or Psycho-neuroses. This, I believe, is a decided step in advance in clinical neurology and psychiatry; it is the outgrowth of the refinement in diagnosis and classification inaugurated by Kraeplin. It is based upon a more painstaking analysis of facts rather than fancies in the study of disease.

In neurasthenia, in its clinical study, we enter upon the consideration of the morbid states of the mind as revealed in introspection, morbid fears, imperative conceptions, emotional disturbances, loss of will power, etc.; these are facts, demonstrable, and when analyzed, show how deeply implicated is their origin, nature and expression in the violent reactions upon mind and body. They are as natural in sequence as is chemical union and if so understood will enable the clinician to differentiate in diagnosis and to classify properly the mental phenomena under consideration. Dana, doubtless, had in mind the study of these fundamentals when he dwelt upon the particular importance of studying mental symptoms, in neurasthenics, in order to detect the relationship of their condition to one or the other group of major psychoses.

The psychological analysis of neurasthenia does not seek to explain it; it simply correlates conditions in a practical way and demonstrates beyond a doubt that the laws of psychology are definite and are not changed by disease. This explains why neurasthenia is, as Allbutt says, "a uniform and consistent malady," even though it be as he further says, "a wide generalization drawn from a world of particulars,"—particulars which are apt to gather in sub-groups, forming fairly consistent and uniform maladies, subordinate to the main disease, and the nature of these several constellations of symptoms was revealed only by a subtle analysis and a training in exact clinical observation which were scarcely at the disposal of the forefathers of physic."

When we proceed to analyze a case of neurasthenia, along psychological lines, we find an opportunity to study the psycho-physical characteristics of the disease; to learn too of cortical localization, viz.: the representatives of the special sense centers in the cortex; the centers of ideation; of positive knowledge, the essential physical basic centers of the best part of the mind; a knowledge of memory localization and the personality of the individual. Again, we undertake to study the great sub-conscious self where the great majority

of our mental actions never enter consciousness at all.

This is an attractive and practical field for it explains plausibly too, the mental disorders of neurasthenia. It gives a working basis upon which we can found our therapeutics and also offers the opportunity for more thorough study of psycho-pathology. The application of the neuron-theory to morbid mental phenomena, and especially its extension to the study of sub-consciousness, gives us a working hypothesis for the understanding of the special mental phenomena of neurasthenia. It also shows how closely allied, indeed, is neurasthenia with the more profound state of mental alienation, insanity. The underlying psycho-pathological process is the same and varies only in degree. Upon this hypothesis too, we can reiterate and emphasize what Dana has said that fully one-half of all cases now classed as neurasthenia are mild psychoses which he classes as psycho-neuroses.

Now, let us consider briefly some of the characteristic mental disorders of neurasthenia. First—

Introspection. When a person first becomes conscious of self, it is the beginning of cerebral dissociation—ideas or impressions thus centered "become parasites on the patients consciousness," and ere long, become abnormally predominant and lead to advancement along the line of dissociation. Introspective ideas, in their growth, may be likened to a snow ball—they grow with each revolution—one thought begets another until the field of consciousness is more or less wholly self. This condition is due to disturbance of equilibrium, caused either by functional or organic changes in the nerve elements. The nervous system is but a series of functionally independent elements—the neurons in health are in mutual equilibrium but a group of these elements may be distributed, pathologically, so as either increase or diminish functional activity and as a result we have heightened or lessened resistance to stimuli.

In introspection of neurasthenia we have functional lowering of the excitability of the neuron and of these agencies which depress activity, exhaustion or over-fatigue, (with attending malnutrition) is the chief. In neurasthenia the nervous system suffers unequally from the exhaustion. The higher psychical centers which are concerned in the mechanism of conscious attention, are among the first implicated and of the first of these evidences we have introspection, later the sensory and motor centers become involved; the order of their implication is about as follows: first, a depressed self—marked by introspection, then asthenia (depressed intellectual activity) emotional disturbance intensified by the morbid introspection with possible resulting melancholy state, because the lowered activity of the neurons and their diminished reaction makes possible the continuance of painful emotions (pain is concomitant or lowered physiological activity).

Macpherson has given us a classic description of the pathological symptomatology of neurasthenia, basing it upon the neuron concept, showing how it may merge into insanity; Bancroft says his explanations are certainly plausible. It strikes me they are reasonably probable, and give to us the most rational explanation of the finer mechanisms of cerebral functions. From this hypothesis the slow reaction to mental stimuli, the introspection, the emotional state, the confusions of thought and action and the will loss of neurasthenia are all explainable. It is by no means necessary to suppose that all neurons of all centers are equally affected nor that all ideation centers are involved. We have but to note the mental symptoms in each individual case, in order to show the variation of functional activity. However, in melancholia all of the ideational centers are involved while in neurasthenia the shades and variations are a feature of the disease.

Macpherson, speaking along this line says, "Neurasthenia affords one of the most instructive types of an affection characterized by lowered resistance of the neurons and a tendency to dissociated over-functioning of limited neuron groups. The hyperaesthesias force themselves upon consciousness, and the reacting effect of fixing attention upon hyperaesthetic areas is an increase in their sensitiveness." "In addition, the effect of con-

centrated attention is to form ideation trains of a like emotional tone, which weaken the mental constitution, if persistent, by dissociating important portions of it for the consideration of useless subjective phenomena. In this way a vicious circle of introspection is formed which, unless interfered with or inhibited by more powerful mental processes may become chronic.

Obsessions. The most striking group of mental symptoms in neurasthenia are the obsessions (the impulses) (imperative conceptions) which have their origin in the subconscious self and suddenly spring into the field of consciousness and may become, indeed, an irresistable impulse. The thought, at first, may be downed but soon it arises again, and with each return is more fixed and insistent until ultimately, it is imperative and uncontrollable. It may be a simple thought like counting; I have seen profound cases of neurasthenia, which when inaugurated, had the simple obsession of counting. One would count up to nine, she would count the steps she would take as far as nine, then repeat, etc., etc.; another began by counting in multiples of seven, etc., etc. Other simple impulses like touching objects, repeating a simple sentence, as an example, one of my cases kept repeating, "Royal Baking Powder, Absolutely Pure," a stock phrase seen so frequently in advertisement of the daily press. Other obsessions, simple at first, or complex, as in the negativism described by Weir Mitchell, all belong to the same dissociated group of ideas which characterize obsessions. This dissociation does not necessarily disturb the individuality of the patient, except in the more complex cases. Beginning mildly and capable of being reasoned about, the impulse finally reaches a point where will is overcome; this marks the beginning of will disintegration, a weakening will, the equilibrium is disturbed, and a divided will results, producing the indecision so marked in neurasthenia. I have now a patient who has reached this stage of indecision where it is difficult for him to decide whether to obey the impulse or not. The rebellious desire to overcome the obsession is pitiful to note and rather amusing too in the patient's perplexity. The self assertive state which says, "I will not," changes under the enervation of the obsession to a gentle acquience to it. The disturbance in the higher association centers is in evidence, inhibitory control is impaired and the more the patient wills, "I will not," the more he responds to the obsession.

The pathological explanation of obsessions, as given by Macpherson is, I believe, the correct one. He says, "How can a train of ideas become dissociated?" Only so far as we can understand it, by a group of neurons in the ideational centers becoming hyperaesthetic, or hypoaesthetic, or in other words, by their becoming abnormally resistive or abnormally excitable. The result is dissociated action of the neurons. "Certain neuron groups for some reason become highly resistive, then discharge of currents modified by these particular groups seeks an outlet through other, though limited channels. For this reason, the discharge is all the more intense, and the oftener it is repeated through the new routes, the more easy and persistent does its manifestations become." The variation of violence of the discharge determines too the variation of intensity of projection into the field of consciousness. The obsession thus engenered is as Sidis calls it, "an emotional automatism." The will power with its normal inhibition is slowly undermined due to the normal association action of neuron groups being dissociated. Emotions too loose their normal inhibition for the same reason and when they act in unison with the obsession, intensify and make imperative and persistent the morbid conception." The startling abruptness, the utter irrelevancy, the entire absence of any rational cause for the existence of these insistent ideas are clinical evidence of their mechanical origin in neuron dissociation." (Bancroft).

Macpherson says that clinical observation bears out such an explanation because, (1) Obsessions are most common in neurasthenics, hysterics, and in all degenerates among whom, as a class, other forms of cerebral dissociation, dis-equilibrium, and weakness of nerve elements are generally found. (2) Obsessions may be independent of preceding emotions or any other determining cause.

(3) Obsessions abruptly enter consciousness, often with startling suddenness disturbing ordinary thought, and remain there altogether outside of the influence of the conscious mind. (The sub-conscious explanation of Sidis). (4) They are recognized by the subject as foreign to his personality and his modes of thought, and are not, at any rate, in most cases, blended with his individuality. (5) Their haphazard origin is apparent from the fact of their immense variety, their being as many forms of obsessions as there are of thought.

Morbid Fears. Morbid fears are striking disturbances of neurasthenia and are but the continued evidence of nervous exhaustion. Of this Dercum says, "That fear and weakness should go together is natural." Everywhere in nature they are associated. "That a person whose nervous system is exhausted should also be morbidly afraid, is therefore not surprising." These fears vary with the same degree and insistence as do obsessions. Pathologically speaking they are practically the same as the phobias or fears are but another phase of obsessions, another picture upon the back-ground. Fears project themselves into the field of consciousness in varying conditions. In mild cases we note simply an undue anxiety concerning their individual health, which may soon be dissipated or if accompanied with visceral disturbance may grow to become a constant and persistent fear, only to be relieved after weeks or months of patient treatment. A physician in investigating morbid fears will find that he frequently will have difficulty in eliciting them. For, in the beginning, patients will reason with themselves, the absurdity of the fear and may control it until something occurs to strikingly bring it in evidence and then not only the subjective but the objective presence of fear is marked. Patients frequently date the beginning of illness to some profound emotional shock, or accident, and from that time, the fear has been a persistent feature. Again, some profound visceral disturbance has caused fears to come on suddenly, to become persistent and not disappear even after all visceral disturbances have been relieved.

How frequent indeed is the fear of heart disease met with in the routine of practice and how difficult it is to dispel such a fear, even where we are able to prove to the patient that it was but an evidence of disturbed digestion. Fears associated with visceral disturbances are hard to relieve and fears accompanying vertigo are seemingly everlasting in neurasthenics. The group of morbid fears which are classed as phobias are truly representative, pathognomonic mental disorders of neurasthenia. They may occur independent of visceral symptoms during their course and persistence, they are founded usually upon insistent ideas. They are morbid conceptions which may spring suddenly into the field of consciousness and thereafter be persistent. I have noted a number of such cases where these fears have come on suddenly—the patients giving the date this morbid fear developed, as one patient expressed it, "it came from the dark unknown one day and has remained ever since." These morbid fears have to do with the fear of space—thus the patient just mentioned, a prominent lawyer was walking to his place of business, he came to a street crossing, when the fear of crossing this space overtook him, he experienced all of the physical conditions of fear—cold sweat, rapid pulse, hurried respiration and exhaustion. He could not cross the street, called a delivery wagon going by, sought assistance from people on the street and was taken home and thus began a fear which lasted until he was relieved of the neurasthenia.

I find such fears occur more frequently among the intellectual classes, school teachers, lawyers, physicians, business men and brain workers in general. The morbid fear of crowds is another phobia similar in its characteristics and genuine in its intensity. Bouvert says, "we have a fitting analogue of this fear in the experience of healthy persons when standing in great heights. I regard these fears as truly mental disorders of neurasthenia—diagnostic in fact and rarely evidenced in insanity where morbid fears usually take on other forms. Morbid fears in insanity are episodic syndromes in degeneracy according to Magnan.

We could continue a study of the allied mental states which are so prominent in neurasthenics showing the indecisions, doubts, eccentricities of thought, the aversion to society, etc., if time would permit. In many cases these symptoms are but the evidences of psychic discordances—mental anomalies—the degeneries of evolution so fully studied by Magnan, Morel, Regis and others. These patients represent the transition between the normal and the pathological condition. Regis says of these individuals they are "on the border ground"—they are mentally incomplete and bear the blemish—the defect of harmony and poise."

In acquired neurasthenia we find these discordances which are trying, indeed, in the homes and become a source of worry and anxiety to the patient, the family and all concerned in their welfare. In the daily experience of meeting these mild cases in the consulting room, we hear the recital of the irritability marked by absence of symmetry, the tendency "to blues," to fault finding, irracibility, nagging with occasional emotional out-breaks, (psychical storms) to be followed by a spirit of meekness and forgiveness. Associated are the physical symptoms of functional impairment of the stomach, heart, kidney and menstrual disorders, due largely to the disturbance of general nutrition. The wear and tear of life is evidenced in both mental and physical distress. I believe that the mental distress is more conspicuous and requires more consideration, for, while the physical factors are important and demand thorough study, the success of treatment demands the consideration of the mental factors as of chief importance.

We all know that we meet cases of neurasthenia marked by good nutritive condition, their strength being up to the normal. Such patients are not overly supplied with flesh, they are usually spare, inclined to be tall, are of the nervous temperament, usually intellectual, quick, apt and successful in their vocations. They give a history of having been poor sleepers, of having had capricious appetites and had more or less functional disturbance at times of digestion. They are not necessarily anaemic as blood examination will reveal but withal they are neurasthenics and of a type that promises a battle royal in the undertaking to effect a cure.

Again, we meet the phlegmatic neurasthenic, with decided mental disorder, marked obsessions, phobias, etc., who is overfat—bi fat is a burden to him; and yet, in the cou.s. of clinical examinatoin we find that he is anaemic. He has an inheritance, usually of the gouty diathesis which he has not considered in his manner of living but on the contrary, has abused to the limit. This type of cases requires a painstaking diagnosis to begin with as not infrequently the neurasthenic state is but the forerunner to marked diathetic disease. It is imperative that we study each case presenting neurasthenic states upon its merits and not be guided by the preponderance of nervous symptomatology in making our diagnosis.

Differential Diagnosis. The foregoing remarks suggest the differential study of the neurasthenic patient. I would emphasize the study of the mental phenomena and along psycho-pathological lines. Such methods of analysis at the first examination will enable us to arrive at a full appreciation of the case as a whole and further consideration of the details of history, as observed from day to day, will supply the information necessary to complete the picture. It is important to remember that diagnosis of neurasthenia is made almost wholly by exclusion. We have to consider in differentiation the early or premonitory stages of dementia paralytica in which, age, history and physical signs, viz.: the Argyl-Robertson pupil, ataxia in gait and speech, myotatic irritability, tremor of the tongue and muscles of the mouth, are the chief factors in recognition of paresis.

Again, we must consider the true mental diseases, as dementia praecox and melancholia, in which the element of time and slow evolution of mental symptoms, delusions, apathy, etc., are to be considered as of primal importance. Then, we have certain cortical lesions and focal or organic disease of the brain during the early stages to be considered. Time will not permit me to draw these lines of differentiation.

It is hardly worth while in this paper to discuss treatment. I simply wish to emphasize that the success of treatment demands the recognition of the mental phenomena as of first importance and treatment must be organized along these lines. Isolation; the greatest moral factor in treatment, should be enforced and I believe until we do this properly, we will not be successful. I have lost faith in tentative measures. Next to isolation is the enforcement of rigid systematized rest with modifications to suit the special need of each case.

Neurasthenia is not a disease to be treated by drugs. They have their place but a very minor one in the scheme that accomplishes results. Physical therapeutics with the addition of intelligent nursing and above all the gaining and keeping of the confidence of the patient by the physician is necessary. Discouragement should never be mentioned in the presence of the patient. The spirit of hope, enlivened by work and full belief in our own capabilities is the food upon which neurasthenics thrive and are cured. They act through the agency of the mind and are essentially psycho-therapeutic measures. This fact proves, and in a striking way, that neurasthenics should be considered from a psycho-pathological standpoint and that in dealing with them, we are clinical workers in mental disease.

References.

Arndt, Rudolph, Dictionary Psychological Medicine.

Barker, L. F., The Nervous System.

Ball, B., Dictionary Psychological Medicine.

Playfair, W. S., Dictionary Psychological Medicine.

Bancroft, Chas. P., Wood's Reference Handbook, Vol. 5.

Maudsley, Henry, Pathology of Mind, Body and Will.

Macpherson, Affections of the Mind.

Regis, E., Manual of Mental Medicine.

Kraeplin, Lehrbuch der Psychiatrie.

Taylor, J. Madison, Will Loss, International Clinics.

Mitchell, S. Weir, Clinical Lectures.

Dercum, F. X., Nervous Disease.

Sidis, B., Psychology of Suggestion.

Dana, Chas. L., Journal of Nervous and Mental Disease.

Boston Medical and Surgical Journal, March 31, 1904.

Berkeley, Mental Diseases.

Abrams, Albert, The Blues.

Proust and Ballet, Neurasthenia.

Allbutt, Thos. C., Allbutt's System of Medicine.

Discussion on the Paper of Dr. Norbury.

Dr. L. Harrison Mettler, Chicago: The essayist has brought up for discussion one of the most valuable, yet, at the same time, one of the knottiest problems that we have to solve in neurology. He really is considering what was at one time known as cerebral asthenia, although he terms it the mental symptoms or manifestations of neurasthenia. In this particular matter we have a great deal of trouble in our practical work because we are approaching the pure psychoses and hysteria. I have, at times, read the reports of cases that I felt convinced were cases of hysteria and not of neurasthenia. There is a sharp distinction between the two, though, I admit that at times it is difficult to distinguish the one from the other in actual practice. Theoretically there is a very marked difference between the symptomatology and pathology of the pure psychosis and the mental manifestations of neurasthenia.

I think that the matter can be cleared up, to a very large extent, at least, by appreciating that neurasthenia is a disease of the entire nervous apparatus; perhaps, not to the same extent in all the neurones, but more or less in all. We must believe that in neurasthenia the whole nervous system is more or less involved; therefore, if you have mental symptoms, you also will find other symptoms that will help you to make a diagnosis.

Another point that will help to clear up the diagnosis is this, that in its last analysis neurasthenia is an organic disease, organic in the broadest sense, and represents a physiochemical change somewhere. We can always determine the lowered vitality, blood poisoning, strain, or whatever you please to call it,—the etiologic factor,—the lowered action on the part of the nervous apparatus.

Dr. Hugh T. Patrick, Chicago: Five or six years ago I read before this section a paper on the treatment of neurasthenia in which I tried to emphasize the same point made by Dr. Norbury. As I apprehended, he agreed with me that in the current diagnosis and treatment of neurasthenia, the mental element, the element of psychosis, frequently is overlooked. The great majority of cases of neurasthenia are not half as much a state of exhaustion as a perverted mental state. Which is primary and which secondary, it is difficult to say. And oftentimes it is impossible to determine which came first and which followed. In an individual case it is almost impossible to recognize the two distinct elements and the preponderance of one over the other. They are nearly always in combination.

The rest cure is very much misunderstood and, for that reason, very often misapplied.

The rest cure is a name to cover what ought to be a combination of incipient rest followed by a systematic work cure. The isolation, of itself, is of absolutely no avail except as a means to control the patient, to influence him and to make him realize his exact condition and to enlist his assistance to establish in him a healthy frame of mind. Isolation of itself alone is a perfectly useless procedure, and yet, I am sorry to say, it is often resorted to as such.

Let me illustrate this in another way.

I once asked a former assistant and very ardent supporter of Dr. S. Weir Mitchell in his rest cure ideas, what he thought his results would be and what the results of Dr. Mitchell would have been had it been possible to carry out the massage, the electricity and the forced feeding by means of machinery, without having the personal element of the physician in the case. He laughed. Of course, the result would be nil practically. In my opinion, the reason that Dr. Weir Mitchell had such a tremendous success in the treatment of these cases was because of what we may call his personal magnetism, his management of the individual as a whole, and not so much of the disease by the feeding, massage and electricity.

Just one more point. Those phobias, to which Dr. Norbury called attention, are real emotional states, but not primarily so. In nearly every case, careful examination, thorough quizzing of the person, of the circumstances of the initial affair, the very beginning of it, will reveal the intellectual basis, a definite fear of some particular calamity, which the patient concluded, not emotionally, but logically, might affect him. He is very apt to forget what that was of which he was afraid at one time; all he knows is that he is afraid; that he trembles; that his legs give way under him, and he has all the signs of tremendous overwhelming terror, but he does not know why, but the physician can find out the reason.

Dr. Harold N. Moyer, Chicago: In listening to this discussion, I fancy that it may seem abstruse; but it is not. It is very simple, and I want to impress upon those of you who are not neurologists, and I trust that there are not many who are, the importance of this subject. It is one of the vital things to everyone engaged in the practice of medicine,—this understanding of neurasthenia. Of course, the types, the severity of the disease, varies from the slightest departure from a mental and physical normal state, to the greatest departure. The lighter forms of neurasthenia are present in many cases of acute disease particularly in convalescence.

Many physicians listen to tales such as Dr. Norbury relates of the mental picture of neurasthenia, and what have they said to these poor unfortunates? "You are morbid, fanciful and nervous but there is **nothing the matter with you.**" If you have said that, you have made it difficult to help that person. That is an unfortunate departure at the outset, because, in the majority of cases, the recovery of the neurasthenic is prompt. He has a natural tendency to get well. But, if you tell him that there is nothing at all the matter with him, you place a bar against your helping him to get over his morbidity and nervousness, a bar over which he must climb before he can get well.

Tell him that his fears are a part of his disease; that one thing simply has followed the other. Let him think that they are real and then treat him and he will be glad to help because he wants to get well.

MEDICAL ETHICS AND ITS RELATION TO THE CITY HEALTH OFFICER.*

BY F. E. WALLACE, M. D., MONMOUTH.

To me it seems strange that such a subject as professional etiquette should need to be brought before a society of physicians for discussion. I say strange because, a physician should have had instilled, during his college course, a thorough knowledge of what constituted etiquette, and above all else, should have that higher and nobler qualification, that something which is called manhood. He should have had moulded into his character, charity, benevolence, and confidence and should always hold before his minds eye, that good old golden rule: "Do unto others as you would that others should do unto you."

In many communities there is a frequent clash between health authorities and physicians upon matters of quarantine and disinfection. In some instances the fault may lie with the health officer, who may be inclined either himself or through his assistants to assume a somewhat arrogant attitude, and we may say that the health officer needs to be firm and aggressive in dealing with ignorant and fanatic constituents, which attitude he is not always able to lay aside when in contact with the physician.

The physician, on the other hand, is inclined to forget that the health officer is really his greatest ally in eradicating con-

*Read at the 54th Annual Meeting, May 17, 1904.

tagious diseases. The family physician holds a responsible position and often the key to the situation. He must advise his patients, allay their fears, soothe their feelings and, above all, make sure that the infected premises and persons wherein he is the medical advisor are freed from contagion. Any physician who is sufficiently familiar with modern surgical practices to properly carry out an operation, is certainly skilled enough to apply these methods to the elimination of infection. The principles involved are simple and plain, but need to be carried out to the smallest detail. Sometimes physicians who have not given the subject sufficient thought, allow their patient to do the disinfecting. This often means that a small sulphur or formaldehyde candle is burned, or some sort of odor is produced and the premises are certified as disinfected. Health officers cannot be censured for refusing to release quarantine under such procedures.

In performing the duties of health officer, one comes in contact with every physician of his city and should be on friendly terms with all, because if health officer and physician should openly disagree, then the laity is judge and a critical judge it is. It necessarily follows that our profession is not benefitted by such strife and it throws discredit on the greatest and most important part of our work, prophylaxis. Prophylaxis should be the initiative of all therapeutics, prevention is paramount to cure.

If the public could only understand the necessity and value of preventing disease, how many, many lives could be saved, which are now sacrificed to ignorance, stupidity and cussedness.

If your opinion should differ from that of the health department, do not make trouble and hard feeling by criticism and opposing acts. Criticisms by the public fall thick and fast, on a health officer, and physicians can do a great deal to prevent it and could, if they would, educate the people along the lines of prophylactic medicine, so that in a few years, the statistics of death from contagious diseases, could be cut in two, as well as the number of cases.

When asked what you think about an action taken by the Health Board, have you given adverse opinion? Some of you have. When asked by the Health Board to observe certain rules which were deemed wise, why is it you have not done so? Did you ever remark that in your opinion, "No cases of smallpox have existed in our city or state" or have you said, "if the Health Officer saw this he would call it smallpox." Then again, have you ever said "Don't let the Health Officer know about this or he will quarantine you," such remarks have been made many times by physicians. Why is it? Is it mere forgetfulness? Is it jealousy? Is it for the purpose of a better standing with the public? Is it the dollar you are after? Alas, alas, human nature is beyond my comprehension. Now in all honesty, do you think this professional etiquette, and do you think the golden rule applies? There are a few, however, who forget this Golden rule and substitute the one, "Do others and do it so hard they can't do you." Or perchance the one, "Do unto others as others do unto you." Instead of offering criticism and doing acts which might cause trouble, do you not think it much better to say, "It is all right" and thus treat the Health Officer with respect and professional courtesy. If you do not owe it to him, you certainly owe it to yourself and your profession. In some cases if doubt exists as to diagnosis, it may be a conscientious doubt, but we must take the highest authorities for our opinions.

Boards of Health receive their power from the State Statutes. It is called "police power" and the highest of all. Therefore they can make and carry out any rule or regulation which they may deem wise to adopt, under certain conditions. You will see that their power is great and can cause trouble for those who carelessly or willfully disregard their rules. Remember that the Health Officer has put up a bond to do his duty and must faithfully carry out the laws or else he is liable. The position of health officer is not an easy place by any means. He earns more than he receives. Let us therefore, labor in behalf of the rules and regulations of our health department and thus promote the cause of preventive medi-

cine and benefits to humanity and also promote a friendly feeling between the Health Officer and ourselves. Let us help him to hold up his hands.

How happy the physician who can dwell in unison with his fellow colleague, how sweet the remembrance of those who have gone to their everlasting rest, of whom it can be said, "He had no word of criticism or bitterness against his fellow physicians." From my own personal knowledge, such a man I believe, was the late Dr. Marshall of Monmouth. He had that nobleness of character which prevented him from uttering words that condemned. I believe he lived within the radiancy, which emanated from the golden rule and which cast a harmonizing influence throughout his whole life. You all know of just such noble men in your community. Manhood should dominate every act of the physician and etiquette should be a dictator.

In conclusion let me add a few "Don'ts:"

Don't be a knocker! If there is any chance to say a good word for the Medical Profession, say it. Don't pull a long face and look as though you had a sour stomach. Hold up your head, smile and look for better things. Hide your little hammer and try to speak well of your colleagues no matter how small you may really know yourself to be. When a Doctor drops in, jolly him. Tell him we have the finest set of doctors on earth, and we have. Don't discourage him by speaking ill of your fellow physicians. Lead him to believe that each doctor is a friend and that we live as white people live. Don't knock. Help yourself along by observing the Golden Rule and push your friends with you. It's dead easy. Be a good fellow and soon you'll have a procession of followers. No man ever helped himself by knocking other people, in character and business. No man ever succeeded by trying to make others believe he was the only doctor in town, or the only man who knew anything. You can't climb the ladder of success by treading on others corns. Keep off the corns and don't knock. You're not the only! there are others; and they have brains and know something as well as you. There's no end of fun minding your own business. The other physicians will like you better. Nobody gets stuck on a knocker. Don't be one.

Don't forget that the public are ignorant and need enlightenment.

Don't forget that others will criticise—We should praise.

Don't express an opinion if it cannot be a good one.

Don't forget that prevention is paramount to cure.

Don't forget the beam in your own eye, when talking.

Don't forget to look around for good example and follow it.

Don't forget that in praising others we help ourselves.

Don't forget that in performing acts of charity, benevolence and justice, we are character building.

Don't forget the "GOLDEN RULE."

THE EXERCISE OF PREVENTIVE MEDICINE A FACTOR IN THE SOCIAL EVOLUTION OF MAN.*

BY S. O. HENDRICK, M. D., HENRY.

"In relation to cause and effect," if ill-health represented the former and medicine the latter, "if to remove the cause is to remove the effect," it would be the exercise of preventive medicine.

And as this seems to me to be the function of social evolution, I deem it proper to consider my subject upon its basis.

All organisms are naturally acted upon by their environments and life is an expression of their reaction. When reaction ceases, an organism is a passive prey to surrounding forces, life becomes extinct and death succeeds it. A living organism acquires its development by reacting against its environments. Therefore the incessant struggle unchangeably confined to life is, of course, not without its advantage.

So long as the living organism is able to maintain the equilibrium of its function, it is in a healthy condition. And as man's or-

*Read at the 54th Annual Meeting, May 17, 1904.

ganism is more capable of reacting against his environments the basis of his health equilibrium is relatively a broad one, differing from other creatures. It is so because it is so destined that man's organism should be of a higher order of development. He must not only withstand the forces of gravity and raise himself from the earth; maintain an equal temperature notwithstanding the surrounding changes from heat to cold; hold the moisture of his tissuse against the drying influences of the encompassing air; but he must combat the whole category of his, by possession, social system as well.

As a result, a symptom, an irritation and pain demanding help appears, a penalty for the broken law of his nature, a social force eager for relief so great, that it can well be called a law propelling him on in the course of its evolution.

Naturally through medicine relief has been sought, thus simply adding "fuel to the flames" by treating the symptom instead of removing the cause.

This discovery, however, has led to the consideration of the prevention of medicine. And in the attempt to exercise it, the feature of not only society's ignorance in regard to it, but selfishness appears.

Selfishness is the fountain-head of all the principal environments that are the basis of physiologic equilibrium, degeneracy. For to luxuriate in the loves of his affections in self aggrandizement, has ever been the goal of man. The nature of which is sensualism in the prides of his intellect and ostentatious display, culture, pleasureable emotions, eating and drinking, and venery. An inevitable sequence of antecedent conditions, the more notable of which, comprehensively grouped, called civilization; whose most conspicuous feature is a marked departure from primary typical human conditions, manifested by an increase of intellectual capabilities and corresponding differences in modes of thinking and habits of living, characteristic of civilized man.

That such is a departure from a common center that can not be continuous in a straight line is as obvious as the fact that motions of matter are so ordered in the economy of nature that whether of molecules or masses, they are rotary, orbital, vorticular or spiral, but never linear, always tending towards but never finding—rest.

By such motions are effected the balances essential to the stability and integrity of all forms of matter, of the Universe Itself!

That such deviations from common or typical human developments cannot be continuous in the same direction without culmination and return towards more common conditions, may be known from the fact that all ancient civilization did so culminate and return through an arc of degeneracy to more primitive conditions.

It is a manifestation of an "Inevitable Sequence," a reversal of physiological processes at a certain culminating stage of development and subsequent conditions in an opposite direction until balance is restored. The general principle, in accordance with which physiological movements tending to degeneracy are primarily instituted, may be designated as the law of physiologic equilibrium, a factor for the exercise of preventive medicine in the "Survival of the fit."

It is a fact with gravitation, evolution, and self preservation, the first law of nature, the necessities of the universe.

Too much polite literature and the elegant arts necessarily tend to create frivolous and effeminate habits of thought and feeling separating the sentiment from the deed, whereas the end of feeling is to impel action. To luxuriate therefore in fine sentiment, noble thoughts and the elegances of style, and rest in this indulgence does of itself tend to immorality and decay. The springs of action are thereby perverted from their proper use, and character is developed like that of the novel reader who weeps over the misfortunes of imaginary heroes and spurns the wretched from his door.

The lovers of culture recognize its evils and dangers and hence they clamorously practice the necessity of action, but in vain as their own examples show. They give fine theories without the hope of realizing them, which is not surprising, for their habit of considering things from every point of view, and weighing all that can be said for and

against every opinion, begets a sophistical and hesitating disposition, which of course renders action distasteful and also warps the practical judgment and unfits it for deciding upon any right course of conduct. It makes a dreamer; and the work of the world is not done by dreamers because they are not men of action. In the nature of things is founded the historical relationship between culture and licentiousness. History seems to bear out the statement that ages of luxury and refinement have been invariably noted for licentiousness.

Culture's aim is to educate man so as to fit him for the enjoyment of the greatest possible pleasure. It shrinks from vice not because it is evil, but because it is gross and disgusting.

In the modern sense of the word it is derived from Athens, the city of the mind, the university of the world. And Athens fell, the consequence of degeneracy.

Nutrition becomes impaired by congestion from over-accumulation of waste unassimilable foods, leading to starvation which contributes to many inimicable factors under the head of degeneracy.

Commencing at infancy, mankind is surfeited at the breast and infant feeding, the central thought of the parent being the danger of starvation and the need of constant ingestion of food. If indigestion follows, another nurse is procured and changed food according to their notion, in equal quantities will be given. Later, when the child is able to occupy a place at the table, all discrimination is left to his own tastes, the parents reasoning that the appetite is the best guide and the child's food inclination should be followed. Anything the child wants as foods or fluids are given it freely. The disturbances of digestion that follow are usually treated as weaknesses and tending to diseases, together with disturbances of the digestive organs. Consumption, rheumatism, diseases of the liver, stomach and kidneys are discernible, climate cures, changes of school and culture and many remedies are tried. Puberty is finally passed, and the digestion is permanently impaired. The body is ill-nourished Fatty deposits have begun. Food and liquid demands are mere impulses. Taste is disordered. Large quantities of certain classes of foods are taken, and then abandoned The same is true of teas, coffees, mineral waters, beers and wines. Indigestion, obscure or well defined nerve failure, nerve disturbances, irregularity of sleep all follow. The subtle tonic bitters containing from 20 to 40% of alcohol finally comes, or the wines or whiskeys and inebriety has come. The relief from the use of spirits is so great that it is continued; then following is a rapid, sharp degeneracy and the inebriety is chronic. Complex mental and physical changes appear; followed by opium and other narcotics, changing from one to another.

Those under-fed are persons who have been practically starved in many ways. It may come through exclusive diets used from necessity or from carelessness and neglect.

In very poor families the food from infancy may be almost entirely potatoes, cornmeal or pork; or fruits in more tropical climates, in some form of liquid foods, no variety and often one article almost exclusively. In other families, from theory children would be forced to use one class of food and not others. Carelessness is the most prevalent in a large proportion of cases. After the nursing period children are supposed to eat the same foods as the remainder of the family, and without discrimination are given anything that is prepared. No care is taken nor judgment exercised in regard to the diet as to quality, variety or nature. Such a diet being insufficient causes states of starvation and defective growths leading to narcotics. The influence of occupation upon decay productions is due chiefly to unhygienic environments. Although some occupations are injurious from over use of certain functions, and others, from mental stress or emotional excitement involved, and still others from undue long hours of work, injury more often arises through the inhalation of vitiated, irritating, toxic or even infectious atmospheres, from exposure to trauma, to extremes or variations of temperature, to alterations in the atmospheric pressure. From the like productions of decay primevial respiration is known to be subverted and

what was physiologic becomes pathologic, the expiratory function lessened. Says an eminent authority: "He has found circumscribed lung areas which yielded a dullness or even flatness on percussion, areas which he calls, Atelectate Zones." Besides there is a tendency to dissipation associated with many occupations. And the loss of the natural coordinate action of related groups of muscles, as occupation spasm or palsies, is most frequent in those exposed to severe mental strain or in those with neurotic tendencies. Occupations associated with great mental effort frequently lead to forms of hysteria, neurasthenia and paralytic dementia. To such affections, statesmen, artists, financiers, journalists, authors, lawyers, physicians, teachers and students are especially disposed. The comparatively isolated life of agriculturists, with its tending to brooding and introspection, seems to favor the development of melancholia and forms of insanity. Neurasthenia therefore is often the product of urban life, melancholia of rural life.

As a consequence of disease, premature death and degeneracy, irritation and pain demands for help manifested in depreciated nervous centers appear; and as a phenomenon that of an "Evil Spirit" within causing a demand to be healed, hence arose the "Healer of the Evil Spirit."

And have we not the same manifestation of ignorance and superstition as a psychic parity with the savage represented in the Dowie and Christian Science doctrine?

Then follows the medicine man, who studies herbs, the physiology and surgery of man in a blind way; in fact the science of medicine dawns upon him. Then he begins to discover the effect of his herbs as narcotics and stimulants. Thus flattered he thinks he has disovered a "cure all." Now commences his career of doing much harm. Finding that large doses were disagreeable and difficult to take, he conceives the idea of condensing. Hence alcohol was discovered. And in the light of scientific investigation he has handed down a host of drugs which he has found to be of the greatest value as stimulants and narcotics.

Therefore we find drugs representing these properties in most general use. And the most recent investigations of their effects upon the system after having studied the laws of vital processes, show their danger without this accurate knowledge. Because pain, nervous irritability and weakness have been undoubtedly the leading symptoms demanding the greatest attention naturally soliciting sympathy, drugs meeting these demands have been the most sought.

Thus the physician has carried their use to an evil. Flattered by their soothing effects he has lulled his patients into the self satisfaction of a cure and thus holds them until nature effects the cure, or otherwise. Finally the druggist getting on to the demand, lays in a stock, an enormous amount familiar to us all, to say nothing of the nostrums for the alcohol contained in them. And when we take into consideration the enormous number of drug stores in our civilized lands, and I will include dram shops because of the alcohol unconsciously sought as a medicine, we can somewhat realize the nature of the drug habit. By way of illustration I cite you to China and India for the opium habit; Germany for beer; England and Scotland for whiskey and ale; France for wine; America for beer, wine and whiskey. Besides in these latter countries are used other narcotics, opium, cocaine, and others.

And as these contribute to degeneracy, when we consider the influence of heredity, its magnitude is apparent.

The copulative desires of man being perverted he is a victim of erotic fancies. It contributes to abnormal ovulation and thus over population and infectious diseases of the genitals of both sexes, and the pelvic organs of women, also to degeneracy. I have classed these agents as directly contributing to degeneracy, under the head of those comprised in the general factor for the exercise of preventive medicine in the "Survival of the fit" through the arc of degeneracy because it is admitted how futile it is to try and restrict the race to a limited and innocuous environment. For in the defiance of the Humanitarian the male fists will clash; the glutton, the inebriate, the profligate will persevere regard-

less of the reformer, and in the markets of trade where misdirected commercial zeal racks the nerves and often blasts the mind, the physicians' warnings will ever go unheard. So lightly is man's health regarded that while departments of war and state and of agriculture are considered necessary, the protection of the people from disease finds no place in the cabinet that conducts the affairs of men. Accordingly boards of health are limited exceedingly in the exercise of their duties. But in the nature of things the general principles, in accordance with which social movements tending to prevent physiologic movements that tend not only to degeneracy but disease and premature death, are also primarily instituted, may be designated as a factor for the exercise of preventive medicine not in the "survival of the fit" through the Arc of degeneracy. Those under its head are well set forth in the principles of preventive medicine by the most recent authors with only suggestions as to their exercise making them nil so far as usefulness.

And from the nature of the physiologic and subsequent social movements therein set forth necessary for their exercise, from the nature of the principles of preventive medicine it is easy to see the reason why; because they are matters of which society is not only ignorant but also of which they are immoral; therefore social movements tending to prevent physiologic movements that tend to degeneracy, disease and premature death, must arise in the main indirectly through social movements accounted for otherwise than intellectually or morally.

Morals, like the Jewish dispensation of Moses not to be eschewed as a discipline and pathologic prevention through virtue and the moral fear of unclean things to eat, etc., have played their part and handed down a race for morals, exemption from diseases—and especially degeneracy—not to be excelled.

Christianity, together with culture, to a certain extent, has handed down a soft sentiment begetting passive natures that disposes of freedom of speech and action. Hence there is developed more generous, chivalrous and charitable minded people tending, through industry, to better opportunities by way of comforts of life, as for example: in the way of benevolent gifts to hospitals and scientific researches, desirable abodes, ease, recreations and amusements.

Long before the mosquito was known as an intermediate host for malaria and yellow fever, screened houses, clean premises and drainage of land were the custom; and since raids with brooms and kerosene have been the rage.

Acquired immunity by excess in the prevalence of infectious diseases and germ virulency regulated by germ environments is to be considered in the prevention of infectious diseases. Three thousand years ago the Chinese are said to have practiced the introduction of crusts from various patients into the nostrils of children that they might acquire the smallpox and thus possess future immunity against the dread disease. This led to the practice of inoculation that spread to Persia and finally to Turkey. Early in the eighteenth century Mary Wortley Montague, wife of the British Ambassador of Constantinople, wrote from Adrianople a letter containing this celebrated paragraph: "Every year thousands undergo this operation (inoculation with virulous matter) and the British Ambassador says pleasantly that they take the smallpox here by way of diversion, as they take the waters in other countries. There is no example of any having died of it and you may believe I am satisfied of the safety of their experiments, since I intend to try it on my dear little son."

This led to a rather extensive adoption in England, and finally in America, of the practice of direct inoculation of variolous material into well persons. Objections to the method were that it produced a disease from which one might contract virulent smallpox, while in a small proportion (about 0.3 per cent) of cases a fatal result followed. It was finally abolished by law in England in 1840. At present virulent virus is not employed in human practice. Jenner in 1796 deliberately injected a human being with the virus of cowpox as a preventive measure against variola. Vaccinating in this manner was introduced into the U. S. in 1800 by Water-

house, the "American Jenner." Later forms of attenuated virus were introduced by Pasteur. Sunlight is a good stimulant to change and transform the tissues of the surface of the body. It vitalizes them and the metabolism is better performed by its influence. It is also a preventive of disease. Houses should be built with all the windows possible, especially bay windows on the sunny side. For those who suffer from rheumatism, neurasthenia, neuralgia, anaemia, catarrh and tuberculosis, sclerosis or paralysis of the nerve centres, the lymphatic or strumous, arthritic or scorbutic diatheses, nothing can be compared with the sunbath in helpfulness. If the sun's rays should be very powerful in midsummer, they can be softened by interposition of stained glass or pale green or yellow shades; in the spring from April to June, however, sunlight can be taken direct. The sunlight effect must be watched and exposure graduated to suit individual needs. Sun baths should never exceed an hour's duration. Should a patient be nervous after a bath shorten time of exposure; if that is not sufficient, soften the rays by interposing some medium of poor absorbing power.

The head should be well shielded with some patients especially if the sun has reached or is nearing its zenith, and a cool compress may be applied to the forehead and back of head. It is generally better to take a sunbath before the sun gets so high—say between 9 and 11—or even earlier in midsummer. The oblique rays give the best results. Severe headache is the result of a focusing power of sunlight on the brain unless due precaution is taken.

Does not society's movements coincide with this? Is it not true that houses of the most modern kind are well lighted with windows, especially bay windows, on the sunny side, and softened by the interposition of stained glasses and shades in pale green or yellow from custom and style?

Do not people in the north follow the sun's rays in the winter as tourists and in the summer seek country and sea-side resorts, as diversions? And in the meantime do they not unconsciously observe the conditions of the sun's rays? And does not the Roentgen's and the Becquerel's rays, and the Finsen's light also meet these conditions of the sun's rays as industries?

That the erect posture is unnatural and thus a source of great diversity when we consider the nature of a hustling civilization, there is probably no doubt.

For when compared with other creatures it is plain to be seen how much more unnatural it is for man to raise himself from the earth. First he has to creep; then in his efforts to get his balance, practice like a tight rope walker. And is it not fair to presume that he has never perfectly attained his balance without conscious effort?

Besides there are femoral and inguinal hernias, prolapsed kidneys, hemorrhoids, appendicitis, varicose veins, etc., etc., for which the erect posture seems especially responsible as a predisposing cause; because due to the erect posture more or less loss of equilibrium of the viscera is acquired. Thus when a certain organ, say a kidney, is lifted from its place by a sudden strain, or a gradual one by habitual constipation and tedious child births aided by an inherited or acquired general debility and consequently weakness of the ligaments and blood vessels of support, it becomes prolapsed. The right kidney pressing upon the superior mesenteric vein interfering with the return circulation of the appendix, is often the cause of catarrhal appendicitis.

On the other hand a prolapsed kidney pressing upon the ovarian vein as it passes to enter the vena cava interfering with the return circulation of the pelvic organs is often the causative relation to diseases of those organs.

In the proportion that health is maintained without effort; by proper regulation of food supply and an absence of abnormal stimulation or, sedation of function so that sexual erethism or the abuse of stimulants and narcotics, are not a constant menace to the health equilibrium; and by the influence of occupation due chiefly to hygienic environment, the predisposing cause, general debility tends to be removed.

Sometime in the evolution of man, he has changed his warm, balmy climate for a colder

and more humid one. Then leaving his coat of hair, a perfect conductor of air and light, so indispensable for the health of the skin and its appendices, for an artificial one; and consequently his habitation, with the sky for its roof, the air for its walls and the ground for its floor, for those of beauty and grandeur he lives in cities and towns, clothed in fine, close fitting and cumbersome raiment. Thus conditions arise which are disastrous to his health. For from the shades of his towns and cities, and their filth a good soil is furnished for the propogation of germs. And multiplying in number and virulency they make mankind their battle ground of contention.

As environments for the evolution of germ virulency, light, darkness, temperature and filth, the following is true: In the absence of light it is a well known fact that in general bacteria flourish, and to many pathogenic micro-organisms light, especially sunlight, is fatal, instances to the contrary being rare. Temperature is also known to be an important factor in micro-organic life. Probably the primeval environments of the micro-organic world were relatively warm and almost, if not quite uniform. The variations in temperature requirements which we observe at the present epoch means a general differentiation and a slow but certain adaptation to environments which always bring in their train new properties, be the germ pathogenic or non-pathogenic and probably this is the reason why certain diseases are more prevalent in temperate zones and others peculiar to the tropics and exotic in relation to their country; and many indigenous to certain tropical areas but which are not naturalized in this country, such as: oriental plague, Asiatic cholera, yellow fever, dengue, yaws, elephantisis, etc.; besides these some diseases such as malaria and dysentery appear in a more severe form in tropical than in temperate zones; on the contrary scarlatina, erysipelas, whooping-cough, cerebro-spinal fever and what is known as cholera nostra are more common in temperate zones.

Well lighted and dry dwellings and business houses; clean cities and towns; easy means and methods of changing abodes, even from one most remote to another; the presence of many trees in a district having an important effect upon climate by modifying winds that makes temperature more equable and renders the air more uniformly humid, a diminution of dust, and certain gases believed to be healthful given off by trees; purer water and sewage systems; land drainage; are some of the social movements tending to prevent these environments.

In respect to accidents, the shock of an Iroquois disaster is not without its advantages towards the prevention of the like by way of example.

And in respect to crimes the same may be said of the most cruel and heinous ones.

THE RADICAL CURE OF INGUINAL HERNIA.*

BY L. L. M'ARTHUR, CHICAGO.

From the papers which have just been presented it is evident that since the advent of aseptic surgery several good and efficient methods have been devised for the cure of this very common ailment. During the past ten years the changes which have taken place in methods have been more largely those incident to selection of suture materials and their insertion than to increased knowledge in the anatomy of the parts involved. Having tried all the recognized procedures, I have gradually arrived at the firm conviction that the Andrews' modification of the Bassini operation constitutes the ideal readjustment of structures offering the greatest resistence to subsequent hernia. The sincerest praise this method can possibly have is its extensive use at home and abroad. It is but just that his priority and originality for the operation known in Switzerland as the Gerard, in France as Lucas-Championierre, and now in America as the improved Halsted should be finally recognized.

By a process of gradual evolution, almost all operators have come to the conclusion that to strengthen the weak point of the abdomin-

*Read before the Chicago Medical Society, May 25, 1904.

al wall, certain structures must be sutured to Poupart's ligament. Now whether it be the internal oblique and transversalis alone, or added thereto the inner flap of the external oblique, it has been found practically to make but little difference in the end results in most cases. Letting the decision of the varying order in which these structures should go, to those who believe that a certain order of attachment must be followed, my aim shall be to show that it is feasible with the patients *own living tissue* to close the hernial canal, after any recognized method, the only difference then being in the nature of the material used for suture.

It will be generally admitted, I presume, that when hernial operations heal it is by a process of aseptic granulation tissue growth between the structures sutured, the "plastic lymph becoming later organized" of the older writers. It will be equally admitted that, no such union of muscular tissue sutured by lateral opposition to tendinous tissue can be expected as is found for example, in the origin of the internal oblique from the outer two-thirds of Poupart's ligament?

Hence when we suture structures to Poupart's ligament with absorbable, or removable sutures, what we obtain is a simple adhesion through the interposition of a thin granulation tissue layer. McBurney's demonstration however in the case of hernia that granulation tissue is but a poor resisting medium led him to abandon the idea that this alone was sufficient to effect a cure; since a stretching and yielding too frequently occurred. It was therefore the idea of incorporating in the lines of union, an unyielding white fibrous tissue, that led me to the experiment of using some of the tendinous fibres of the external oblique muscle as a suture material, with what success I will later detail after explaining the steps of the procedure.

(Here show specimen, drawings, and describe dog experiments. Relate case of scar tissue removed from old case.)

Having made the usual skin incision, exposing the external ring, the latter is prolonged upward in the line of separation, paralleling exactly the tendinous fibres of the external oblique muscle to its commencing muscular insertion. This divides the aponeurosis of the external oblique into an external and internal flap. The sac having been treated as the operator may prefer, a bunch of white fibres which enter into the formation of the internal pillar of the ring are split off from the edge of the internal flap of the external oblique, quite up to their insertion in the muscle belly, where they are cut loose from the muscle, but left attached to the spine of the pubis. This strip should vary in width from one-eighth to one-quarter of an inch, according to the development of the tendinous fibres which, in children and women are not so strong as in the male adult. In case a Bassini is done, a similar strip is taken from the outer flap, the lower end of which terminates in the fibres of the external pillar of the ring. The operation is then completed according to the choice of the operator, and the Andrews' imbrication method can be used, these strips being used as suture material for a running stitch.

This gives us a living, inelastic tissue, which can be used as a suture material in any of the methods advocated for the radical cure of inguinal hernia. The first stitch is so applied as to give the desired lumen to the new external abdominal ring, using the one terminating in the internal pillar for the first suture, the remaining one for the superficial layer and buried stitches.

I would like to call your attention to the fact that what has in the past been called a canal really is not a canal. The term ought to be abandoned. It would have been better had it never existed, for it is probable that it has been the effort to create and make a new canal to which Dr. Ferguson objects. By retaining the original position of the canal, and its direction, it is possible that the resistance to intra-abdominal pressure is greater than when the two weak points, the internal and external rings, are directly opposite each other.

What constitutes the internal ring is simply the suturing over the cord of the internal oblique in this (indicating) angle, making the cord rest against the lower origin of the

internal oblique and transversalis muscles by bringing down their fibres.

With these strips of tissue a running stitch is made; the little fibrous ends are tied with a piece of silk, which is used to handle them and draw them through. A fine catgut stitch is passed through the tissue at the point it emerges, and, then is passed once or twice around it and incorporated in the knot. The silk is removed, leaving only one knot in the wound.

Undoubtedly, the great value which either the Bassini or Andrews' operation has gained over those which brought the tissues edge to edge, has been that the tissues have such a broad surface cementing one to the other that they act much as two pieces of adhesive plaster. At the end of thirty-six hours they offer much resistance to pressure at right angles to the sticking surfaces. The union is so strong that Dr. Andrews' sometimes lets his patients out of bed on the fourth or sixth day, believing he has a strong union.

If there be used a simple catgut stitch or a kangaroo stitch, or the ordinary absorbable material, at the end of one or two weeks, the internal oblique, which has been sutured to Poupart's ligament, no longer has the suture material holding it there. It is held against white fibrous tissue parallel to its long axis, by a simple plastic cement material. My idea has been that if we incorporate white, inelastic fibrous suture material, we have that which will aid in preventing a recurrence. This operation I have done nearly a hundred times and with perfectly satisfactory results. I know of no recurrence. I have had the opportunity to examine microscopically the scar removed from a patient dying of a gangrenous appendicitis one and a half years after the hernia operation, and the slides show this living inelastic tissue in the scar tissue. It can be very plainly seen.

Having demonstrated that the grafted tissue in the lower animals would not slough, but remain incorporated in the cicatrix, and having done the operation nearly a hundred consecutive times on the human subject, in all ages, from 6 months old to 78 years, when not complicated by gangrene of bowel, I am fully convinced that we have an additional aid in preventing relapse.

1st. By minimizing the amount of foreign material introduced in the wound.

2d. Lessened danger of sepsis.

3d. Greater resistance to future hernia through the incorporation of the unyielding white fibrous tissue.

4th. Smoother convalesence locally, as there is less caking and infiltration, less febrile reaction.

5th. That at least equally good results are obtainable.

6th. That the ten minutes necessary to the preparation of the strips does not greatly increase the risk.

POLYNEURITIS.*

BY L. HARRISON METTLER, A.M., M. D.,
CHICAGO.

Professor of Mental and Nervous Diseases in the Chicago Clinical School; Associate Professor of Neurology in the College of Medicine of the University of Illinois; Neurologist to the Norwegian Lutheran Deaconess' Home and Hospital.

What definite knowledge we possess of multiple neuritis is comparatively of recent acquisition. There are many problems in regard to it that are still awaiting solution. The disease is not by any means so well established nor is our information in regard to its true nature as complete as the text-book descriptions would lead one to suppose. We know more about its etiology, prognosis and treatment than we do about its symptomatology and pathology and we are not too well informed about these. A brief survey of the history of the establishment of polyneuritis as a distinct disease entity will in the best way indicate what is yet to be learned in regard to it.

That paralysis and sensory disturbances follow the ingestion of certain toxic substances like alcohol, lead and arsenic and certain infectious fevers, like typhoid, diphtheria, scarlatina, variola, erysipelas, etc., was long noted; but they were spoken of as alcoholic paralysis, lead palsy, febrile sequelae and for the most part were attributed to dis-

*Read at the 54th Annual Meeting, May 17, 1904.

ease of the spinal cord. As early as 1822 Jackson of Boston first wrote what seems to have been the nearest approach to a scientific description of what we now recognize as alcoholic polyneuritis. His paper was entitled "Arthrodynia a potu" and contained a brief but fairly accurate account of the paralysis, disturbed sensation and mental peculiarities. There is no attempt however at a pathological explanation of this symptom-complex. Still further clinical descriptions of the disease without pathological explanation, were made by Magnus Huss in 1852, and Lancereaux in 1864. The term alcoholic paralysis covered all of the knowledge of that day. Duchenne in 1855 had given an accurate and elaborate description of the clinical manifestations in his great work. He looked upon it as an ascending paralysis of spinal origin but this was a mere hypothesis unsupported by any post mortem examinations. It was Dumenil of Rouen who in 1864 made the first careful post-mortem examination of a case of alcohol paralysis and announced to the world that the peripheral nerves were diseased while the cord and spinal roots were entirely unaffected. This announcement was apparently too radical and too subversive of all previous notions for the medical fraternity to comprehend and accept at once. Hence Dumenil's first observation was allowed to pass unnoticed. A couple of years later he made a second observation of similar import. This case Leyden denominated one of neuritis but as the post-mortem findings included spinal foci of disease, later writers, like Starr, pass it by as a doubtful or at least atypical form of the disease. While Dumenil's first observation was therefore the beginning of our knowledge of peripheral multiple neuritis as a distinct entity, it was not until about a dozen years later that the really first satisfactory report of a case with the microscopic findings was made by Eichhorst. Three years later Joffroy added still further to our knowledge and in 1880 Leyden at length established peripheral multiple neuritis as a distinct, positive entity. Further advances have been made by Stewart, Eisenlohr, Pitres, Schulz, Leudet, Ross, Buzzard, Strumpell, Korsakoff, Oppenheim, Starr, Mills, Hun, Cole and others. It will be noticed that up to Leyden's time, the progress of our conception of the disease was marked by the following steps. At first it was regarded merely as an indefinite form of constitutional trouble, a sort of general toxic paralysis. Then it was recognized as a toxic disease of the nervous system but whether of the brain or spinal cord it was not clear. The paraplegic character of its symptomatic manifestations and their resemblance to the symptomatology of certain recognized spinal cord diseases, caused it in the third step to be regarded as a disease of the spinal cord. When the peripheral nerves were found to be diseased many thought that this was a complication or sequel and that the trouble was still primarily of spinal origin. Even after cases were examined in which the lesions were confined to the peripheral nerves, much was said and written about the symptoms being due to the spinal cord and about ascending degenerations between the cord, its roots and the peripheral nerves. Finally under the authority of Leyden it was accepted by the medical world that there was such a disease as a pure uncomplicated peripheral neuritis of wide extent. Cases might be complicated by cerebral and spinal lesions, or diseases of the brain and cord might have associated with them, either as complications or sequelae, disease of the peripheral nerves. Of pure, uncomplicated multiple neuritis a definite clinical picture was formulated which still remains as the basis of the usual text-book descriptions.

Adopting the alcoholic type of the disease as a model we may briefly note the following as typical symptoms; a rather sudden feeling of weakness with a pricking sensation or other paraesthesia followed by numbness in all four extremities. This ascends more or less rapidly up the legs and arms. The weakness increases and the patient begins to find difficulty in walking. In a few weeks the paralysis becomes so pronounced that there is complete wrist- and ankle-drop. Though all the nerves of the limbs are irregularly involved, the musculospiral and the

anterior tibial seem to be the most seriously affected. At this time the reflexes are lost in both the knee and the ankle. The muscles are noticeably wasted and if tested electrically exhibit more or less completely the reaction of degeneration. The cutaneous reflexes are diminished or annulled and there is some anaesthesia. Hyperalgesia is often a valuable symptom.

Local tenderness in the muscles, less frequently in the nerve trunks, is so characteristic a symptom that it helps to differentiate polyneuritis from other affections with similar disturbances of sensation and motion. Hyperaesthesia may be discovered in areas of the skin along side of areas of hyperaesthesia. As a result of the sensory disturbances ataxia may be present. Hyperidrosis, oedema, swelling in and about the joints and even skin eruptions and ulcers may be among the vasomotor, secretory and trophic manifestations. Let it be observed that these symptoms are remarkably symmetrical in distribution, are limited almost entirely to the ends of the extremities and do not include as a rule the rectal and vesical functions. Such in outline is the clinical picture presented by a pure multiple neuritis but such a pure type of the disease as pointed out by Mills long ago, is rarely observed.

The following case which I saw in consultation with Dr. E. E. Henderson is a fair example of alcoholic polyneuritis.

Mrs. L., age 44, Norwegian. Nothing of moment in the family history. Had measles, pertussis and a "light touch of pneumonia." Has otherwise always been strong and healthy. Has been long addicted to the use of alcohol which at times she would take to excess according to the testimony of her husband. A week before I saw her she suddenly noticed a feeling of numbness with gnawing and creeping pains all over her body but especially in the outer parts of her limbs. Soon weakness in the legs and arms supervened and when she came under observation there was complete paralysis with wrist and ankle-drop. The paralysis was flaccid in type and seemed to involve the extensor muscles more than the flexors. As a consequence the fingers were all partially flexed. The muscles were soft and flabby but not yet much atrophied. They were all extremely sensitive upon pressure and passive movement. In fact so sensitive was the patient that the slightest touch caused her to scream with pain, which interfered with the completion of the examination. The deep and superficial reflexes could not be elicited. There was a well defined disturbance in the pain, temperature and muscular senses. Hyperaesthesia rather than anaesthesia characterized the tactile sense. Poor eyesight was complained of but the vision was not examined. The pupils were normal in size but sluggish in action. The hearing was perfect. There were no girdle pains nor any involvement of the rectal and vesical sphincters. The mind was affected and there was at times mild delirium. The psychosis was of the well known confusional type with amnesia and delusions in regard to time and space. The patient laughed and chatted in a manner that at first would not be thought to reveal any psychic disturbance. The happiness and feeling of well-being was very noticeable. She was reminiscent but would project events of the past into the future. Though it was a cold, midwinter day and she had not been out of her bed for a week, she talked easily and fluently about having just come in from the garden where she had been picking some flowers and caught some burrs and thistles on her clothing, which she tried to pick off as well as her paralyzed arms would let her. The amnesia, disorientation, pseudoreminiscence and confabulation were typical of Korsakoff's syndrome. Under treatment there was marked improvement, the wrist-drop quite disappearing. After several weeks however she died of hypostatic pneumonia.

In the alcoholic type of multiple neuritis the cranial nerves and brain functions are very often affected, so much so that some authorities look upon them as part of the typical complexus of symptoms. Among the cranial nerves the third is most frequently affected; then the sixth. Reflex pupillary rigidity is rare but nystagmus, diplopia and ptosis may all be expected. The optic nerve is scarcely ever involved though optic neuri-

tis and even partial atrophy have more than once been observed. The cerebral symptoms I have already referred to. Polyneuritic psychosis had long been noted but it was Korsakoff who, fifteen years ago, gave it the importance which it really seems to deserve. It is probably due to a mild degree of alcoholic encephalitis though the hypothesis has been put forth that it is the result of the practical isolation of the patient's mind by the shutting off of his normal afferent impulses through the widespread peripherial neuritis.

In all the more recent descriptions of polyneuritis a large and increasing space is being given to the complications, accidents and associated manifestations of cerebral disease. Sometimes these are so prominent and so unique that one wonders whether the neuritis is not the complication instead of vice versa or at least whether both the neuritis and the complications are not mere local expressions of a still more general underlying trouble. This is not so obvious perhaps symptomatically as it is pathologically. The symptoms of the peripheral disease necessarily obscure those of the central trouble; but upon post-mortem examination lesions of the cord and brain are very frequently being found associated with lesions of the peripheral nerves. These lesions are largely of a poliomyelitic character in the cord with atrophy of the cells and degeneration of the spinal roots. The same sort of lesions are observed in the cranial nerves and the encephalic structures generally.

Upon the increasing number of these observations the opinion is growing among pathologists that multiple neuritis is not so much a disease of itself as a mere local expression of a much more extensive intoxication of the nervous system. As far back as 1886 Mills formulated the following conclusions in regard to multiple neuritis as a disease: In its pure and simple form it is very rare; it is more frequently associated with myelitis or encephalitis or with both myelitis and encephalitis. The combinations thus possible with peripheral polyneuritis are almost innumerable. According to the more recent observations of Marinesco, Bickeles, Sana, Goldscheider and Moxter, Preiss, Schlesinger, Oppenheim and others polyneuritis is characterized almost constantly by alterations in the central nervous system. In the words of Oppenheim the same poison produces these central alterations that produces the peripheral neuritis. They are chiefly diffuse and disseminated degenerations of the roots and of the posterior and anterior horns.

The very recent observations of Clarke and of Cole confirm these findings and add to them alterations of like character in the brain. All forms of multiple neuritis, whatever the toxin may be that provokes it, exhibit with rare exceptions the above pathological picture. According to Cole these central changes are not attributable to the peripheral neuritis. Though the peripheral neurones are the ones mainly affected in many of the cases of polyneuritis, in other cases the morbid process implicates chiefly the central neurones. The two groups of cases do not appear to be sharply divided.

Upon this pathological basis the frequency and number of the socalled complications and accidents of polyneuritis become explainable. Nay, more, the question legitimately presents itself as to whether these ought to be considered complications and accidents rather than integral manifestations of the disease of which the peripheral neuritis is but one of the local expressions. Cole frankly affirms that the lesion of the peripheral neurones is only one of many manifestations of the disease, and is accompanied by lesions, identical in nature, affecting many groups of neurones situated entirely within the central nervous system. In this connection it is interesting to note that Charcot was wont to contend that peripheral neuritis is not a distinct disease but a substratum underlying the symptoms of several very different affections and that the diseases grouped under the term peripheral neuritis are so different in nature that to thus classify them together only causes confusion.

The force of this contention is clearly brought out when we recall how Landry's paralysis, pseudotabes, certain syphilitic

manifestations, endemic diseases like akatama, Kakkeor, beriberi, anaesthetic leprosy, to say nothing of alcoholic, lead, arsenic and other intoxications and infections are put down as cases of multiple neuritis as though this covered the whole pathology of the disease. This being so among the research workers, it is not surprising that out in the profession generally no term is found to be more abused and misapplied than multiple neuritis unless perhaps it be neurasthenia. One would have supposed that the character of its etiology, namely a generalized intoxication and an infection due in all probability not to the microorganisms themselves but to their poisonous products, as well as the great array of its clinical manifestations would long ago have put a check upon the growing tendency to regard multiple neuritis as a simple and distinct disease of common observation.

Of the cases that I have seen, I cannot recall one in which I was satisfied that the disease was strictly and solely peripheral. In other words all of my cases presented clinically complicating symptoms, sometime or other in their course, that led me to believe that I had central as well as peripheral lesions to contend with.

Nevertheless cases do occur that are believed to be strictly and solely peripheral or what is considered the same thing cases in which the post-mortem findings are limited entirely to the outer ends of the nerves. The older pathologists were wont to classify these peripheral changes under the head of inflammation and call them respectively perineuritis, interstitial neuritis and parenchymatous neuritis. In the forms of polyneuritis now under discussion, the more recent views of pathologists incline to discard the inflammatory conception of the disease process and to look upon it as a degeneration, non-inflammatory but toxic in origin. Oppenheim says that the signs of inflammation, as a rule, are not so marked as are the signs of atrophy. From the examination of his three cases Cole concluded that the central and peripheral lesions expressed a nervous degeneration of toxic origin, in the production of which no essential part is played by changes in interstitial tissues supporting the nervous structures or by changes in the blood vessels concerned with their nutrition. As long ago as 1887 Buzzard stated that though the cases were increasing in which there were no lesions of the cord but merely peripheral disease, the fact was both a remarkable one and hard to explain. He recalled that Duchenne fell back for an explanation upon dynamic, if not organic, changes in the cord; that De Watteville suggested that the cord was functionally damaged and thus caused a neuritis trophically; and that finally Erb believed that the anterior horn cells were affected pathologically just short of an actual lesion. Today the essentially trophic character of the peripheral lesion is being established more and more positively. No pathologist of repute at the present time regards the peripheral lesion in the toxic and infectious forms of polyneuritis as other than atrophic in character. The modus operandi by which the poison brings about this parenchymatous degeneration is almost as much of a mystery as it was in the time that Buzzard wrote. As a result of the increasing observations of central as well as peripheral lesions the opinion is growing that in these toxic and infectious cases the peripheral degeneration is dependent upon the central damage, organically or functionally, of the cells. In other words the peripheral changes are poliomyelitic in origin. More conservative pathologists still believe that there is a direct effect of a destructive character exercised upon the peripheral nerves by the toxin simultaneously with the effect of the same poison upon the central elements.

There are a few cases of polyneuritis in which such inflammatory manifestations as swelling and redness of the nerves, hyperaemia of the nerve-sheaths and even minute hemorrhages have been observed. In these the parenchymatous degeneration is in all probability secondary to the interstitial inflammation or periaxial neuritis. The endemic types of polyneuritis reveal most frequently this pathological picture.

Adopting the recent and excellent classi-

fication of polyneuritis by Stintzing we have the three following types:

1. Neuritis of inflammatory origin, including the neuritides of leprosy, beriberi and certain forms of unknown origin. These are not common in this country and hence need not detain us here.

2. Neuritis of degenerative origin. These are conveniently divided into those of toxic origin (alcohol, arsenic, mercury, sulfonal, carbon dioxide, anilin, etc.), those of infectious origin (typhoid, variola, scarlatina, influenza, erysipelas, pneumonia, rheumatism, parotitis, gonorrhoea, puerperal fever, tuberculosis, syphilis, etc.), those of constitutional and cachectic origin (diabetes, carcinoma and marasmus) and those of systemic origin (following lead poisoning). These constitute by far the larger class of multiple neuritis, and of them the alcoholic is so greatly more numerous and typical as to constitute the model upon which the symptomatology of the disease is based. As I have endeavored to show and believe, the neuritis in these cases is but one expression of a much more extensive disease; it is a non-inflammatory degeneration due to central disease in some cases or merely associated with central disease in other cases. Both central and peripheral lesions are dependent upon the underlying intoxication.

While we are not yet in a position to deny the existence of a pure and simple neuritis of this class we are in a position to affirm that it is rare and that in the vast majority of the cases the whole nervous system is more or less involved.

This conclusion it will be obvious, has a strong bearing upon the variableness of the symptomatology and diagnosis of this class of polyneuritis and especially upon the prognosis and treatment of the particular case in hand.

3. Neuritis of both inflammatory and degenerative origin in which are to be included some cases of Landry's paralysis, postdiphtheritic paralysis and some other primary forms of unknown origin.

My principal purpose in all this is to warn against the careless use of the term multiple neuritis; to urge a more careful study of the nature of and nosological position of the disease; to recommend a more accurate and definite diagnosis in all cases where that is possible; and to treat each case upon its own merits after fully determining the exact origin, lesion and severity of the disease process. To take up these individual points and discuss them in detail would transcend the object of this paper and consume more time than has been allotted to me.

100 State St.

Discussion of Dr. Mettler's Paper.

Dr. Frank P. Norbury, Jacksonville: I believe that the mental syndrome of Korsakoff is present in nearly all insanities or mental disorders attributable to toxemia. I have even seen cases of paralysis agitans presenting this syndrome, although I do not claim that such cases are essentially toxic in origin. I have also noticed it in the acute delirium of meningitis, of the convulsive type, spoken of as characteristic of multiple neuritis. I think it will be noticed that it is not unusual in the mental disturbance of Bright's Disease, of cerebral syphilis and certain cases of alcoholic mania, if the opportunity is given of seeing and comparing these cases.

I saw a case a few days ago, which I am sure could be classified under the syndrome of Korsakoff as described by Dr. Mettler. We should not give all of the etiological importance to multiple neuritis or polyneuritis, but rather say that it is more significant of a mental disorder primarily of toxic origin.

CHRONIC MYOCARDITIS OCCURRING IN ELDERLY PEOPLE WITH ESPECIAL REFERENCE TO TREATMENT.*

BY E. H. BUTTERFIELD, M. D., OTTAWA.

Pathology and Aetiology. With reference to the pathology of the myocardium a vast amount of research on the subject has been made, and through these investigations we are brought to a better understanding; still the fact remains that when we attempt to apply clinically the many pathological subdivisions of disease of the myocardium, it only leads to confusion, and post mortem examniation reveals alone the true condition.

Strümpell says of Myocarditis: "We have to do with a lesion of the cardiac muscle it-

*Read at the 54th Annual Meeting, May 17, 1904.

self, or of its nervous apparatus which reduces the functional capacity of the heart, and thus excites precisely the same disturbance of the circulation as are produced in valvular disease of the heart by purely mechanical conditions. The heart is enlarged, somewhat dilated, though its walls are usually somewhat hypertrophied. In uncomplicated cases the valves prove entirely normal. In the cardiac muscle, however, may be found cicatricial, indurated spots, arranged irregularly and often very abundant. This cicatricial or indurated tissue may in part or almost entirely take the place of the normal muscular fibre."

Hardening of the coronary arteries is commonly present in indurated myocarditis. Certain it is that sclerosed coronaries favor degeneration of the heart muscles.

Weigert states that sclerosis of the coronary arteries is an important cause of fibroid changes in heart wall. The cardiac circulation is slowly interfered with by the hardened coronaries, thus superinducing an atrophy of the muscular fibres without destruction of connective tissue and finally the deposition of fibrous tissues.

Fatty degeneration occurring together with fibrosis of the heart wall, he attributes to the amount and quality of blood supply to the heart muscle itself. For instance, where the main coronary artery is slowly obstructed and at last completely occluded at its origin, generalized fatty degeneration is likely to occur. When smaller branches are slowly obstructed but the main branches remain patent, both conditions are likely to exist, e. g., a fibroid condition together with fatty degeneration. In a series of 21 cases he cites fatty degeneration in 9, as well as fibrosis. In nearly all the heart was hypertrophied. In 9 there was chronic interstitial nephritis, and in 7 atheroma.

Camac in his very excellent article on Chronic Myocarditis, in John Hopkins Bulletin for February, lays down the following laws with reference to the etiology:

I. "Intact muscle and equilibrium of the nervous mechanism are essential to rhythmicity of cardiac muscular action.

II. Equilibrium of the nervous mechanism and rhythmicity of cardiac muscular action, essential to adequate and uniform blood supply to heart tissue.

III. Pure blood uniformly and adequately supplied and essential to proper metabolism.

IV. Any agent interfering with these essentials will cause:

1. Faulty metabolism.

2. Lowered resistance and remote consequences, which in themselves may become factors in still further disabling the heart muscle.

With reference to the special etiological factors might be mentioned *Alcoholism,* also *Constitutional Syphilis,* leading as it does oftentimes to general arteriosclerosis, as well as producing the same changes in the coronaries.

Chronic interstitial nephritis is certainly a factor. Overwork, worry, shock, fright, anxiety, might also be put in the category of causative factors, perhaps a secondary way, however.

Symptoms of myocardial disease are notoriously uncertain, so says Osler. Camac, in his article at its conclusion writes, that even with the best means at hand the diagnosis of chronic myocardial disease is at least difficult and its nature obscure.

Physical Signs and Symptoms. Somewhat indefinite in earlier stages. Sudden death may occur without any previous complaint, even in cases far advanced. Patient generally middle aged or elderly may complain of breathlessness, tightness across chest, palpitation or perhaps pain anginoid in character. Irregularity is not necessarily present, but intermittence is of frequent occurrence.

Inspection, palpation and percussion gives us very little aid in early diagnosis, excepting perhaps to determine the size and impulse of the heart.

Auscultation. In the heart rhythm and sounds do we get early evidences of myocardial disturbance. *Musser* puts tachycardia, feeble, small pulse, dyspnoea on exertion, and arrythmia, as the most important early signs of myocarditis. When dilatation occurs there is often the gallop rhythm, shortening of the

long pause, and a systolic murmur at the apex.

Osler's Classification of Myocardial diseases for Clinical purposes is most excellent.

"(1) Those in which sudden death occurs with or without previous indications of heart trouble. Sclerosis of the Coronaries exist, in some instances with recent thrombus and white infarcts; in others, extensive fibroid disease, in others again, fatty degeneration."

"(2) Cases in which there are cardiac arrythmia, shortness of breath on exertion, attacks of cardiac asthma, sometimes angina attacks, collapse symptoms with sweats and extremely low pulse, and occasionally marked mental symptoms."

"(3) Cases with general arteriosclerosis and hypertrophy and dilatation of the heart. They are robust men of middle age who have worked hard and lived carelessly. Dyspnoea, cough, and sweating of the feet are the early symptoms, and the patient comes under observation with either the gallop rhythm, or an irregular heart with an apex systolic murmur of mitral insufficiency."

Prognosis. Romberg divides Chronic Myocardial diseases into two stages: The duration of the first stage he places from 10 to 23 years. Variation in pulse and heart function with dilatation of the right and left ventricles occurs during this period. The second stage extends over a period of from two to three years.

Morrisey sums it up from the study of 250 cases that the chief guides in prognosis are:

1. Efficiency of the heart.
2. Degree of hypertrophy.
3. Condition of other organs.

His advice is "give your prognosis on the best suppositions," "treat your patient on the worse."

Treatment should include rest, diet, exercise, active and passive in suitable cases. Freedom from care and the judicious use of remedial agents.

Rest is of the utmost importance where there is a break in compensation as evidenced by dysponea on moderate exertion, even though there is no oedema. Here it is that rest, diet, and heart tonics will allow the weakened muscle to recover itself. Then when compensation is restored, graduated exercise is a valuable aid to the weakened heart muscle.

The Schott or Nauheim Method which consists in a system of resistance gymnastics, together with tepid carbonated saline baths 80 to 90 degrees, which is certainly very useful in selected cases.

These baths and exercises can be very well carried out artificially at home.

Time forbids going into detail so I will refer those who are interested in the subject to the Schott methods of the treatment of chronic disease of the heart, by W. Bezly Thorne.

With reference to the treatment of Myocardial disease by exercise either active or passive, one must be guided always by conditions present.

In the matter of diet, Oertal advises:

(1st) The reduction in the amount of liquid, as this is an important factor in the reduction of fat in many cases. Also, increasing the density of the blood. He allows daily about 36 oz. of liquid which includes the amount taken with the solid food.

(2d) The diet should be largely of proteids. Balfour lays down rules for feeding those with weak hearts, which might be well to remember.

1. There must never be less than five hours between each meal.
2. No solid food is ever to be taken between meals.
3. All those with weak hearts should have their principal meal at midday.
4. All those with weak hearts should have their meals as dry as possible.

Flatulence and indigestion are to be avoided in a weak heart for obvious reasons, and by the observance of some of these rules we can eliminate in part, if not in all cases, anything which may tend to embarrass the action of an already struggling organ.

Remedial Agents. Drugs.—Digitalis is useful when cardiac insufficiency, as evidenced by dysponea, irregular, weak and rapid heart, and oedema, exists.

In cases of Cardiac Arrythmia, with an irregular, very slow and weak pulse, and no oedema, digitalis is contra indicated. Abso-

lute rest in bed, and the judicious use of heart stimulants are indicated here.

Digitalis is a valuable cardiac tonic, and especially to the myocardium. The effect upon the heart is to strengthen its systole thus emptying its cavities more perfectly, preventing the accumulation of residual blood, and raising the blood pressure, thereby improving metabolism.

The cumulative effect of digitalis which we hear so much about may be avoided by employing moderate doses of a reliable preparation of the drug, namely the Tincture or French Infusion of the German leaves. The dose of the tincture is m X to XV. Of the infusion ½ oz. two or three times daily. It is well to stop the use of the drug just before tapping is resorted to, or in cases of marked decrease in the amount of urine excreted. It is also well to remember that there is not an absolute rule for the dosage of digitalis. Idiosyncrasy may favor larger or smaller doses.

In cases of general atheroma together with Chronic Myocarditis, it should not be forgotten that it is more dangerous to use the drug in such a condition of the arteries than under normal conditions, for the increase in tension may rupture a brittle cerebral vessel. Balfour suggests the use, in these cases, of the Iodide of Potassium in moderate doses, or the nitrites in conjunction with the administration of digitalis.

Strychnia is a valuable tonic in Myocarditis, and can safely be administered for years if one is accurate in the dosage and regular in the times of administration, carefully watching the effects.

When the percentage of haemoglobin is lowered, iron in some of its preparations is useful. Arsenic in the form of Ac. Arsenic given in the granule from 1-50 to 1-100 of a grain two or three times daily, is exceedingly beneficial.

If anginoid symptoms are present, Nitroglycerine will relieve the pain and lower the blood pressure.

Vascular stimulants ought to be combined with cardiac stimulation where occasion demands.

The administration of mercurials or cholagogue cathartics are often necessary to deplete and lower blood pressure.

Morphia is a very useful and reliable remedy given hypodermically to secure quiet sleep and to relieve dyspnea and anginoid symptoms. It lowers blood pressure also and has no ill-effect upon the heart or respiratory centre. Nothing can replace it in certain cases.

Time and space forbids mention of many other useful drugs to be employed in senile myocardial affections.

To briefly summarize. Chronic Myocardial disease ought to be detected early if we expect to get results from treatment.

The diagnosis is difficult even with the most approved methods.

In making a prognosis it is well to remember that a rational treatment will often be followed by most excellent results, prolonging life indefinitely, even though irreparable conditions exist in the myocardium.

Discussion of Dr. Butterfield's Paper.

Dr. A. W. Baer, Chicago: I want to say a word about one drug mentioned by the essayist, and that is, digitalis. I know of no drug that is misused more and none from which the doctor gets so little satisfaction as digitalis. Most of the infusions are not made from the leaves because the manufacturers put on the bottle containing the fluid extract the directions for making the infusion from the fluid extract. You cannot make an infusion from a fluid extract that will give you any good results. It takes two hours to make the infusion from the leaves. Whenever I write a prescription for the infusion of digitalis, I always make it a point to send the patient to the drug store where I know it will be made properly from the leaves and not from the fluid extract. If physicians will see to that, they will get much better results from the use of the infusion of digitalis than has been the case in many instances.

Dr. Robert H. Babcock, Chicago: There are a few points that I wish to emphasize with reference to the subject of chronic myocarditis. The first is that the diagnosis of the pathologic state of the heart muscle is one of such difficulty that in many instances it escapes our ability. We can diagnose cardiac inadequacy, but we have no means of determining clinically just how extensively degenerated the heart muscle is, nor where the degenerated areas lie.

As I peruse the German literature, I am impressed with the fact that such authors as Rosenbach and Romberg do not attempt to diagnose absolutely chronic myocarditis or fatty degeneration, and similar conditions; but, they do diagnose cardiac inadequacy. Consequently the prognosis of chronic myocarditis is one of the most difficult problems the clinician has

to solve. In many instances it is like betting on a horse race to say what the heart is going to do next.

We see some cases in which the heart, apparently, is running away with itself and is manifesting so much inadequacy and disturbance of action, that it seems as if the patient cannot live many days longer, and yet, that very patient will rally and live for months and sometimes years.

On the other hand, we see cases, in which, judging from the absence of alarming symptoms, the cardiac action and such evidences as we can get from a physical examination of the patient, that he ought to live for years. Then, we are very much surprised when the patient dies suddenly within a very short time after we made the favorable prognosis.

The symptoms of chronic myocarditis are not always commensurate with the degree of changes. Some of the cases that surprise us by living on for months and years, will, on the post mortem table, show most extensive myodardial changes. The other cases that surprise us by dying suddenly, do not always show such extensive changes at the post mortem.

The treatment of chronic myocarditis must be preservative. In most cases we can do something when the incompetence has become marked. We can do very much to preserve the heart from becoming seriously inadequate, and to that end, I believe, judicious exercise is the most important factor at our command. I have under my care in Chicago numbers of elderly men in whom I believe chronic myocarditis is present, who are preserving their compensation, who have recovered from inefficiency sometimes by the judicious physical exercise I have prescribed; sometimes carried on by themselves, and sometimes under the control of a skilled physical gymnast.

Our treatment, whether therapeutic or otherwise, must, it seems to me, be based on the state of the blood pressure if we wish to attain success. When the blood pressure is abnormally high, we cannot expect the heart to reinstate itself and preserve its compensation against such tremendous peripheral resistance, and, therefore, the blood pressure must be lowered. We must, in other words, reduce the amount of work the heart is called upon to do.

There are other cases in which the blood pressure is so low, that if we wish to reinstate the heart, we must use some means to re-establish a proper degree of blood pressure.

I have in mind now, a man, who, judging from the size of his heart, its irregularity, etc., has a chronic myocarditis. All his symptoms have disappeared. His bloodpressure, which, at first, was abnormally high, has been lowered and the heart is now in a very fair degree of compensation.

Dr. Hugh T. Patrick, Chicago: By reason of some experience that I have had, I have, for a long time, been led to give some weight to little points when making a diagnosis of cardiac inadequacy. They are very simple and easy, and although I am not very familiar with the literature, yet I have never heard mention made of these points.

In trying to get an idea of the competency of the heart at a single examination, one must judge very largely by the history, and, I think, you all will agree with me that the statements of patients, even as regards dyspnoea on exercise, are, as a rule, very unreliable. This is especially true in the case of nervous patients, patients who are subject to attacks of pseudo-angina and who have become very apprehensive, whose heart disease is of the brain rather than of the heart itself. I believe that it is unusual for examiners to make a test as to the adequacy of the heart at the time of the first examination. I practice that, as a matter of routine. I have the patient hop up and down my office on one foot until fatigued and out of breath. I take the pulse right then, before I have the patient sit or lie down, and again during the period of relaxation or reaction or fatigue which always follows the exercise, because irregularity or intermittence, with marked falling off of the arterial tension indicative of cardiac inadequacy is then most apt to be detected. Patients, who have been to other men who know more about the heart than I do, all object at this little maneuver of having to hop up and down the office on one foot. Hence I believe that this is not done often.

In cases in which the diagnosis is still more difficult, I send the patient down stairs with instructions to walk up four or five flights to my office. That will yield the same results as the hopping exercise.

Another little point is taking the pulse at the foot. I do not know of anyone doing that as a routine measure, except myself. Perhaps, there are better methods for getting information but I have found it very useful. I do not use the sphygmograph, and, perhaps, skilful men, like Dr. Babcock, can get all the information they want from the wrist, but I cannot. By taking the pulse of the foot I ascertain the condition of the heart and the state of the vessels as I cannot get them elsewhere. I also do that during the period of fatigue following the exercise.

After having examined the arteries of the foot as a matter of routine for several years, I was rather pleased to note recently that some man, in his investigations regarding the distribution of arteriosclerosis, found that the larger proportion of vessels involved occured in the arteries of the lower extremities, below the knees. So that examining these arteries sometimes will give us very valuable information not only regarding the cardiac adequacy, but also with reference to the condition of the arteries.

There is one other point that I wish to mention, and that is, that the dorsal artery and the artery below the malleolus are compensatory as regards size, just as are the radial and ulnar at times. Examining the dorsal artery of the foot alone is not sufficient, because sometimes the pulse is entirely absent in this artery, whereas, in the artery below the internal malleius the pulse may be full and strong.

The Aesculapian Society of the Wabash Valley.

This Society is Composed of Practitioners of Illinois and Indiana Residing in the Valley of the Wabash River. It was Founded in 1846. Regular Meetings are Held in May and October. The Membership is 250.

OFFICERS:

T. N. RAFFERTY, Robinson.....President
H. C. KERRICK, Brocton.....Vice-President
H. McKENNAN, Paris.....Secretary and Treasurer
W. T. MOOREHEAD, Terre Haute, Ind.....
F. E. BELL, Mattoon.....
E. S. ALLEN, ARCOLA.....Censors
C. BARLOW, Robinson.....
J. A. HOFFMAN, Pesotum.....

The Regular Annual Meeting was held in Danville, Ill., May 1904. The following papers were read.

SCARLET FEVER.

BY CHAS. B. JOHNSON, M. D., CHAMPAIGN.

Scarlet fever is universally recognized as one of the most important of the erythematous or eruptive fevers. But previous to the 17th century it seems to have been hopelessly confused with measles, its sister disease.

In 1619 an eruptive fever epidemic prevailed at Wittenberg so pronounced in type and so clearly distinct from measles that a wide-awake medical man by the name of Sennert was enabled to grasp and portray to the world its leading characteristics. At this period the new disease received from the medical profession the name rosalia, but the common people in the German speaking countries called it "rothen hund," or in plain English, "red dog." About two hundred and fifty years ago the great English physician, Sydenham, bestowed upon it the appelation it still bears, namely Scarlatina.

While scarlet fever is confined to no one land or climate, nevertheless it is so universally prevalent in Europe and America as to cause these countries to be regarded as its true breeding ground.

The scourge first reached America in 1735 when it prevailed as an epidemic in the colony of Massachusetts, and from whence it slowly extended along the New England coast. However, for a long period thereafter the disease must have been uncommon for according to the celebrated Dr. Benjamin Rush, who flourished in revolutionary days, it was the fortune of the average medical man of his era to meet a case but once or twice in a lifetime.

But since the time of Dr. Rush scarlet fever has become especially and unwelcomely prevalent in our country. However, it is said to be very much less common in the Southern States of the American Union than in the Northern.

This disease is remarkable for being in one instance the mildest of ailments and in another the most malignant and quickly fatal. Indeed, in this matter of extreme variety as regards severity, it fails to find its parallel in the whole category of human maladies.

But notwithstanding the mild form in which scarlet fever so often prevails, it is, nevertheless, in the aggregate the most fatal of the eruptive fevers. For illustration, in Chicago during the two decades between 1858 and 1877 there were but two years in which the fatality from smallpox exceeded five per cent of all the deaths; and but one year in which the mortuary records from measles was more than three per cent of the total mortality; meanwhile in this same two decades there were seven years in which the scarlet fever fatality was more than 10 per cent of the whole number of deaths from all causes.

Briefly defined, scarlet fever is an acute, infectious disease, attended with fever, sore

throat and a fine scarlet rash which extends over the surface of the body; a symptom-complex that is the direct result of a specific contagious principle not yet clearly defined or isolated.

Scarlet fever has long been recognized as a contagious disease, and while everything points to a micro-organism as the infecting agent, yet the individuality of this has not been satisfactorily demonstrated. Several years ago Dr. William J. Class of Chicago conducted a series of investigations that seemingly pointed to a bacterium, called diplococcus scarlatinae, as the direct medium of infection.

A certain number of observers accept Dr. Class' demonstrations, but a yet larger group of investigators decline to look upon the diplococcus scarlatinae as the causative agent in scarlet fever.

The usual incubation period is three to five days, but cases are on record where persons have been stricken a few hours after encountering the contagion, while exposed to the same influence, others have gone two or three weeks before manifesting symptoms of the disease.

Compared with other contagions that of scarlet fever presents some peculiarities: It seems to have more tenacity, or in other words will live longer than the contagions of either smallpox or measles. For instance a community stricken with either of the last named diseases will promptly supply all its susceptible material, so to speak, and the scourge will run its course quickly and die out, seemingly, from exhaustion. Not so with scarlet fever, for a locality once infected by this ailment will be held in its toils for an indefinite period, and after presenting a number of victims will enjoy an immunity from the disease for possibly a year or two; then with no known new source of contagion the scourge will light up a second time to again die down; and not unfrequently this pathological routine is repeated two or three times before the original source of infection is gotten rid of for good.

Smallpox is notoriously the most contagious of all maladies, and perhaps measles comes next. Fortunately, to mankind in general, scarlet fever is much less contagious than either of the diseases named. Quite a number of persons are immune to scarlatina, but children between the ages of one and five years are especially susceptible to its contagion, and 90 per cent of all cases are said to occur before the tenth year. Infants at the breast are to a considerable degree immune, and so likewise are adults, indeed, the longer one lives the less is his liability to scarlet fever. Consequently the work of the sanitarian in seeking to prevent children from contracting this disease finds encouragement in the fact that every year added to the life of a child who escapes infection, adds that much in the way of immunity.

Clinicians recognize three principal forms, or types of the disease, namely, Scarlatina simplex, or mild scarlet fever; scarlatina anginosa, or septic scarlet fever; and scarlatina maligna, or toxic scarlet fever.

I will not worry you with a labored description of each of these forms, but will let it suffice to say that: Scarlatina simplex is often so mild as scarcely to attract attention. Generally, however, the disease is ushered in by a slight chilly sensation, followed by fever that rarely exceed a hundred degrees, some sore throat and at the end of 24 to 36 hours a light scarlet rash, that appears on the neck, breast, back and maybe, the cheeks. Often, however, the rash is so slight and indistinct as to be overlooked. A day or two later the symptoms all subside and to all intents and purposes the patient is as well as ever.

Scarlatina anginosa, or the septic type is usually ushered in by the same symptoms as the mild, but in aggravated and intensified degree. The initial chill is more pronounced, the fever much higher, ranging from 103 to 105 degrees, the throat is much more severely inflamed and the general discomfort of the patient is very much greater than in the mild type. In addition to these symptoms there is a pulse ranging from 130 to 160, often persistent vomiting and a little later there is developed the characteristic "strawberry" or "cat's tongue." Meanwhile the lymphatic glands are swollen and inflammation of the kidneys with scanty, albuminous urine, is

likely to develop. Furthermore the lungs, pleura, peritoneum, pericardium, heart, brain, eyes and ears are one or more liable to attack in this the septic type of scarlet fever.

In the malignant or toxic type the patient from the very beginning seems to be overwhelmed with the scarlatinal poison and the little sufferer from being in its seemingly usual health is suddenly seized with projectile vomiting or with convulsions that in a few hours may terminate in death. In other instances the first symptom to attract attention is a profound coma from which the patient never wakens.

The rash of scarlet fever is made up of an almost indefinite number of fine red points situated so close together as to constitute, seemingly, a continuous red surface. Usually the eruption begins on the neck, under the clavicles, from whence it extends down over the trunk and extremities and up over the cheeks and forehead; meanwhile the nose, lips and chin remain exempt from invasion.

In three or four days the rash fades and a week or ten days later occurs the process of desquamation which may take place wholly in fine branny scales, or in large flakes. Usually the fine branny scaling occurs on the trunk, while the larger, coarser, crop of discarded epidermis is yielded by the extremities. Cases are on record where desquamation from the hand has been so entire as to constitute a kind of glove, as it were.

Thus we see that a case of scarlet fever in running its usual course covers four distinct periods or stages, namely, the stage of incubation, occupying most generally three to five days; the stage of invasion, one to two days; the stage of eruption, three to five days; the stage of desquamation, one to three weeks, and which is usually completed about one month from beginning of disease.

In most instances the diagnosis of scarlet fever is not difficult after the appearance of the rash, but before the coming out of this the best the medical attendant can do is to give a pretty well-grounded conjecture relative to the true nature of the ailment. When there are other cases, fever, sore throat and vomiting, constitute a trio of symptoms that should make the practitioner realize what he may have to contend with a little later on. As a rule in scarlatina the rash appears on the second day of fever, while that of smallpox is first seen on the third, and in measles on the fourth day.

Furthermore, in contrast to what is true of smallpox, and to a degree of measles, the appearance of the eruption in scarlet fever is not accompanied with a reduction of temperature, but rather the opposite. Again the rash of scarlet fever is smooth, or at least relatively so when contrasted with the goose-skin sensation imparted to the hand by measles and the well known shotty feel of smallpox. Then too, as elsewhere noted, in scarlatina the chin, lips and nose are left free from the eruption, and in contrast appear abnormally white; whereas in measles these parts are blotched and swollen.

Of as much, or, indeed, more importance than the disease itself are the complications that frequently attend and the sequels that too often follow scarlet fever.

One of the most common complications, and one too that often remains behind as a most tedious sequel is otitis media that results from an extension of the throat infection up through the eustachian tubes. Frequently in these cases the tympanum gives way and there results a purulent, stinking ottorrhea, often very protracted in its course. In most cases of scarlatina the lymphatic glands are hypertrophied to a greater or less degree. Sometimes this occurs with the cervical and post cervical glands to such an extent that the enlargement completely encircles the neck and produces what some of the older authors called a "brawny collar," and others a "tippet-neck." In some cases an abscess forms in these enlarged glands and a long period of suppuration in consequence is apt to follow. Occasionally the scarlatinal toxin extends to the joints and a so-called scarlatinal rheumatism results. But in reality the arthritis is not rheumatism but a true infection. Sometimes too, an organic valvular affection of the heart is a sequel of scarlet fever.

But perhaps the most common as well as the most serious complication and sequel of this disease is nephritis, which may be so mild as to be entirely overlooked or so serious as to cause suppression of the secretion of urine and resulting death from coma in a few hours. The scarlatinal toxin produces nephritis precisely as it does otitis and arthritis and a great many chronic and fatal cases of Bright's disease owe their origin to an attack of scarlet fever so mild and so imperfectly developed as not to have attracted attention.

When a child is stricken with scarlet fever it should at once be separated from other children in the family and where possible put in an upstairs room from which all superfluous furnishings have been removed and to which no one should have access save the child's nurse.

Mild cases of scarlet fever require little, or no medicinal treatment. Small doses of aconite for the fever, a mentholated or carbolized spray for the sore throat, an emollient to the surface of the body and care as to diet is about all that is required. However, as scarlet fever is, notoriously one of the most treacherous of diseases, and as the mildest case may be suddenly followed by some serious complication as a severe nephritis, every patient, no matter how light the attack should be kept under surveillance for from four to eight weeks after the inception of the first symptoms.

But while as before stated mild cases require little in the way of medication there are few diseases that call for more prompt and judicious treatment than a severe case of septic scarlet fever. For the high temperature and attending restlessness and delirium the sponge bath assidiously applied is one of the very best remedies, and in some instances the tub-bath or wet pack is yet more effective. The distressing sore throat is often relieved by bits of ice held in the mouth; in other cases a gargle of a saturated solution of boracic acid in water hot as can be borne is especially palliative. When the throat trouble has reached a more advanced stage of inflammation, a three per cent solution of peroxide of hydrogen may be used to advantage.

Internally as a bactericide, corrosive sublimate may be given in 1-30 grain doses every four hours to a child five years of age.

In nephritic cases when suppression of urine is threatened profuse diaphoresis should be brought about by the use of the wet pack or hot air-bath.

Finally when the patient seems to be profoundly intoxicated with the infection, antitoxin should be used precisely as in a case of diphtheria. Medical literature is full of favorable reports of this remedy used as suggested, and recently one of my patients was seemingly greatly benefitted by anti-toxin; the use of which, in my temporary absence, was suggested by two medical friends, Drs. Mandeville and Newcomb, both members of this Society.

Cases are also on record where in almost hopeless cases the happiest results have seemingly been brought about by injecting into the tissues defibrinated blood from a recently convalescent case of scarlet fever.

Owing to the especial liability to nephritis the urine should be frequently tested for albumin; furthermore, the amount of renal secretion should be constantly noted.

Putting the patient on a milk diet, adhering to this closely and encouraging the use of large quantities of drinking water are the best, surest and by all odds the pleasantest means at our command for the prevention of scarlatinal dropsy.

In conclusion permit me to say that after all there is no disease in which the old adage "an ounce of prevention is worth a pound of cure" applies with greater force, than in scarlet fever.

For in regard to all that pertains to childhood and its relations to this scourge, the one most important thing is to keep the young from having the disease.

Of the value of quarantine and disinfection the Michigan State Board of Health furnishes some most interesting and important information: During the eight years between 1877 and 1894 there were a total of 1150 scarlet fever outbreaks in that State and of these 738 were neglected, or in other

words ran their course without any attempt at restriction; while in the remaining 412 outbreaks isolation and disinfection were enforced. In the neglected outbreaks there were a total of 9650 cases, or an average of more than 13 cases per outbreak; and 420 deaths, or more than an average of one death for every two neglected outbreaks. In the 412 restricted outbreaks, there were a total of 1030 cases, or less than 2½ patients per outbreak; and 49 deaths, or an average of one decedent per eight outbreaks. In other words, to borrow a phrase from our political friends, "the open-door" to scarlet fever allowed six times as many persons to contract that disease, and permitted four times as many to die from it as would have occurred under restriction.

To put these facts in still another light: During the eight years between 1877 and 1894, had the 738 neglectful communities in our sister State of Michigan been as watchful and painstaking as their 412 more thoughtful neighbors, 7895 cases of scarlet fever would have been prevented, and 328 deaths from that remorseless scourge would have been obviated.

THE DIAGNOSIS AND MEDICAL TREATMENT OF SYPHILIS WITH REPORT OF CASES.

BY E. S. ALLEN, M. D., ARCOLA.

At the May meeting of this Society in 1901, I read a paper on syphilis which produced a varied and peculiar discussion.

We are still looking forward with hopes ever bright to the day when some genius will solve the mystery of infallible syphilitic diagnosis. What a relief it will be when shown a skin, mucous, glandular, organic or bone lesion to say positively this is or is not syphilitic. The modes of syphilitic infection are three in number, sexual, accidental and hereditary. The hereditary infection may be propagated by the father, the mother, both parents or placental transmission. The medium is the blood or secretion from a sore of an actively syphilitic person. The primary lesion of syphilis is the chancre characterized by a diffuse infiltration of the connective tissue with various cells, the Lustgarten bacilli and changes in the small arteries and veins. Associated with this initial lesion are changes in the lymph glands which become hyperplastic and finally indurated.

The secondary lesions are the superficial lesions of the skin and mucous membranes.

The tertiary lesions are the deeper and more profound lesions, consisting of circumscribed tumors, called gummata and an arteritis, which is not peculiar of this disease. These are the lesions which develop in the bones, periosteum, muscles, skin, brain, lungs, liver, kidneys, heart and adrenals. The primary stage begins within one month from the date of inoculation and extends from six to twelve weeks. The lesion of the primary stage may be a papule, a pustule, an ulcer or an erosion. It generally begins as a small, red papule which gradually enlarges breaks down in the centre leaving a small ulcer. The tissues about this become indurated hard and gristly (the hard chancre.)

The size of this lesion is variable, so small sometimes that when located in the urethra it is overlooked. The lymph glands in the region of the chancre enlarge and become hardened. Suppuration may occur in both glands and chancre.

The secondary stage begins from three to twelve weeks following the appearance of chancre and extends for a variable period. It is characterized by fever 99 to 105. There may be chills and night sweats. I have had one case which I took for malarial fever. The lesions which we call secondary are those of the skin and mucous membrane. The initial skin lesion in the majority of cases is a macular syphilide which occurs on the trunk, arms and legs, the face is often exempt. The initial eruption may be papular, pustular or squamous. The milder the eruption the less severe the disease i. e., a macular patient will as a general rule do better than a pustular patient. With the fever and the roseolous rash the mouth and throat become sore.

There is hyperemia of the pharynx swollen

tonsils, often with small kidney shaped ulcers thereon.

There can be no hard and fast lines drawn between the lesions of the secondary and tertiary stages of syphilis. In fact some of the lesions which generally appear late are the first to appear coming on before the primary sore has properly healed.

The special affections of this stage are certain skin eruptions gummatous growths in the viscera and amyloid degenerations. The skin lesions of this stage show a greater tendency to break down ulcerate and destroy the deeper layers of the skin and in healing leave scars.

Hereditary syphilis does not vary from the acquired form in any particular except it lacks the initial lesion.

The severity of the disease determines the type of efflorescence and is also influenced by the time when the foetus was infected.

The later the infection the milder the form of efflorescence which first appears. Hence an infection taking place early in gestation will be borne dead or show an advanced stage of the disease, represented by the more intractable forms of the efflorescence and severe general symptoms.

The eruption may be on the child at birth or come in three to six weeks. This eruption may be macules, papules, pustules, or bullae. Occlusion of the nares comes on at birth or within two or three weeks.

All of these types have been cured.

Syphilitic pemphigus usually causes the death of the child, no matter what the treatment.

In a former paper read before this Society I held that chancre in some cases could not be diagnosed. I still adhere to that opinion.

The only means by which you may be sure is confrontation. In finding the suspected party in the case actively syphilitic. If this cannot be done it is well to remember these points. A chancre is at first, generally a small, red papule which later breaks down in the center forming an ulcer. In time the base of this ulcer becomes infiltrated, hard and gristly, forming the so called hard chancre.

Also in time the glands in the region of the chancre become infiltrated and hardened. The chancre generally appears in from three to twelve weeks after exposure. The diagnosis of chancre will be considered, by time of appearance after exposure, first appearing as papule, afterward ulcerating and becoming infiltrated, and where possible confronting the suspected party.

Your further diagnosis will be by eliminating chancroid and herpes. The chancroid begins as a pustule or an ulcer. Develops within three days after exposure. It generally occurs in the poorer classes who are uncleanly, and hence do not use good judgment in securing the partners for their indulgencies.

The chancroid is generally multiple and affects opposing surfaces, while the chancre is generally a single sore.

The chancroid is autoinoculable. While the chancre is not, unless it contains a mixed infection. The secretions of a chancre are scanty and serous. While the chancroid has a profuse purulent secretion.

The chancre is rarely painful. The chancroid is generally quite painful.

Herpes is caused by mechanical or chemical irritation or neuroses and begins as a group of vesicles, painful, itching, and tends to coalesce. The secretion is moderate. Squeezing it a drop of watery fluid exudes. Wipe this away, squeeze, and another drop exudes.

This can generally be repeated several times. Herpes is readily, and rapidly curable, while chancre is slowly curable.

In the well to do, and cleanly, you should be very suspicious of a single lesion on the genitals, whether it appears as a papule, erosion, pustule, or ulcer.

The diagnosis of secondary, or tertiary syphilis may present still more difficulties. If the case be a man, you can go into the history without hesitancy. They will sometimes deny specific taint, knowingly or unknowingly, in proof of which I submit the following case: On May 11, 1904, Mr. J. L. presented himself at my office, for treatment of a very bad skin disease. I show you his photograph herewith. He was thirty-seven

years old, single, engineer, family history good, pulse 96, temperature normal. Had typhoid fever in 1879, malaria spring 1903. Severe case of gonorrhoea in 1894, lasting six months. Had it again, but not so bad in 1898. No history of chancre, and denies syphilitic infection. Several kidney shaped ulcers on his tonsils, nasal septum eaten through, large pustulo squamous syphilitic skin lesion on right leg, which began as a small papule, and spread extensively.

Three years ago, a small papule appeared on forehead, over right eye, spread over the forehead, involving portions of the right cheek and eye, and his left eye. The right eye is ulcerated badly, the lids eaten considerably, patches on forehead, and lid of right eye covered with thick crusts from which pus is being discharged. Along the margin of the skin affection of the leg I found a pustulo crustaccous syphilide.

The area of skin over which diseased process had passed, was a dark ham color. Of itself almost diagnostic. There was some glandular enlargement. Under treatment of K. I. and elixir calisaya I. Q. S. and hot fomentations, recovery is rapidly proceeding. Fourteen days after treatment was begun, he was able to be on the street, with the bandages removed from his face.

On October 10, 1902, Mr. J. C. sent for me in the night. I found him suffering a severe pain from hip to heel. On posterior surface of right leg in the line of the great sciatic nerve. On deep pressure the nerve did not seem to be tender as is generally the case in sciatica. I however, could attribute his trouble to no other cause. A hypodermic of morphia gave him some rest. The next day he was about feeling fairly well with less pain than usual with sciatica. He said his leg bothered him more when quiet than when stirring about. This sort of thing continued for about a week. He would work during the day, and suffer intense pain till two or three o'clock in the morning. Finally I woke up to the fact that his trouble might be specific. On questioning him, he gave a syphilitic history. A course of iodides removed his sciatica.

Mr. H. K., married, aged 29, engineer. Family history good, excepting a sister and uncle had died with cancer. He had had no severe sickness. Had gonorrhoea several times. In June, 1892, had a sore on his penis, followed by syphilis. Went to Hot Springs for four weeks, took about 25 bottles of "Three S." In 1895 went to Hot Springs for six weeks returned apparently cured. In 1901, he called on me with mucous patches in his mouth. I gave him a mixture of potassium iodide and mercury. The sores healed. He stopped treatment and the sores reappeared. He then went to the Springs for one month, but after taking a few baths, came down with malarial fever and went home feeling worse than when he left.

In June, 1903, he noticed that his testicles were hard and somewhat enlarged. About Nov. 15, 1903, a sore came on his right testicle, which grew rapidly. He treated this trouble with a physician who evidently thought it a case of tuberculosis, as he put him on creosote.

On December 1, he came under my care. His condition then was as you see it in the photograph. There was a large sarcocele of right testicle. While the left testicle, was about twice its natural size. He was anaemic, and run down, and had syphilitic rheumatism of the right leg and foot, which was very painful. The treatment was, ten drops of the saturated solution of K. I., one hour after meals well diluted in water, increasing the dose one drop each day. Before meals he took two drams of the elixir of Cal. I. Q. and S., with a hot bath each morning, lasting for 30 minutes, and hot fomentations applied to the testicles for one hour each night. He progressed rapidly toward cure and in five weeks went to his work, his organs being nearly well as shown by the second photograph.

In December, 1902, Mrs. K., a young woman, married, 29 years of age, called on me to relieve her from an attack of asthma which had been bothering her for several months. The disease had progressed to such an extent that it was impossible for her to rest at night. On examining her lungs I failed to find the rales of asthma although

she had had a very bad night. Examination of her throat revealed hyperaemia of the pharynx and larynx. I was satisfied that my patient did not have asthma and was unable to account for the profound impression seemingly caused by the slight inflammation of the throat.

One day, about a week after she had come under my care, she showed me a number of small blotches on inside of her right arm, just above the wrist, which she said had annoyed her for about one year. On questioning her, she said that it was not painful, and hurt her no way except the looks. There was several papules about the size of a pea, which were dark ham colored. These, her doctor had called eczema, but could not cure them. The eruption had none of the characteristics of an eczema. I had seen this peculiar lesion in specific cases, and concluded at once that my patient was syphilitic. I put her on increasing doses of K. I. In three weeks her "eczema" had disappeared, and her asthma had been cured.

The diagnosis of syphilis will be made first by history of the case, which is often misleading, second by careful physical examination. This should involve the lymphatics for enlarged glands, the skin for eruption, or scars. These skin scars for several months after healing will be ham colored, finally becoming white. Look for the peculiar syphilitic eruption on the wrists and palm of the hands. The palmar eruption is generally squamous. Examine the genitals of the male for scars following chancre. Examine the throat and pharynx for hyperaemia, and enlarged and ulcerated tonsils. The mouth for mucous patches, the nose for the eaten septum, the tibia for its scabbard shape, and the leg below the knee for scars following ulcers. In women the history should include miscarriages, still births, and children who have died soon after birth. The headaches of syphilis are quite severe, and much worse at night. The margin of the lips where the mucous membrane and skin unite is thickened in syphilitics.

Be guarded in your diagnosis of enlarged glands and tumors, till you are sure they are not specific. No less a surgeon than Dr. Owen, of Chicago, removed a chain of glands from a young woman's neck, supposing them to be tubercular.

The enlargement returned. She was again returned to him for operation. While she was being prepared for the operating table, a young physician was called in consultation. The young man made a discovery. The operation was postponed, the lady was told that she was too weak to undergo it, and was sent home. This was a case of syphilis.

Dr. Bevan once told me that he was called by Dr. Hyde to operate on a case of rectal carcinoma. He objected to operating till the case had had a thorough course of iodides. The treatment by iodides removed the lesion, thus proving it to have been specific. When called to see a baby in convulsions, or with paralysis, who has a history of wakeful and restless nights, with normal or nearly normal temperature, be careful of your diagnosis. Such cases have been diagnosed as tubercular meningitis, which afterward have proved to be syphilitic.

The prognosis of syphilis is good according to the severity of the case, the control you have over your patient, and the treatment instituted.

Treatment. The prophylactic treatment is by converting the vast army of harlots into peaceful and loving housewives. I have no solution of this problem to offer. The next remedy is the education of the ignorant into the causes and results of this vile disease. Especially, should boys receive a proper degree of education in this line. I believe that this should be done in the common schools of our country. I further believe that it should be done by the medical profession. But instead of our doing this, which should be our duty to mankind, we allow what little education they get to be given them by "quacks," charlatans, patent medicine venders and personal experience.

A syphilitic man or woman should not marry till time and treatment have cured them. The pregnant syphilitic woman should have rigid anti-syphilitic treatment during her pregnancy.

The syphilitic baby if taken early and submitted to rigid treatment, can be absolutely

cured. The medicinal treatment is essentially with mercury and iodides. With these, tonics and heat as accessories.

REFERENCES.

Keyes, White and Martin, Hayden, Osler, Strumpell, Rotch, Hyde, Holt, Shoemaker, Starr, Stellwagon, Tyson and Lyman.

SOME COMPLICATIONS OF PREGNANCY—PARTURITION AND THE PUERPERIUM.

BY E. L. LARKINS, TERRE HAUTE, IND.

While pregnancy is a physiological condition and its progress and termination in the very great majority of cases satisfactory, yet in a small per cent pathological processes supervene causing much suffering on the part of the mother or interrupting gestation, and in a few cases are the direct cause of death of both mother and child.

To some of the latter conditions I desire to call your attention believing the subject worthy the earnest consideration of every practicing physician, for it is under his care that practically all cases sooner or later come.

The normal attachment of the impregnated ovum is to the inner side of the upper segment of the uterus but occasionally it becomes adherent to the ovary or somewhere in the fallopian tube; or it may drop into the abdominal cavity and fasten itself to some of the structures contained therein, develop, and almost without exception prove serious or disastrous to the mother.

The question of ovarian pregnancy has been and is now strenuously denied by many authorities but a few and among them Leopold and Martin, have recorded positive evidence of its occurrence.

Primary abdominal pregnancy is still more rare than ovarian and both strictly speaking without practical issue.

By the term extra-uterine is understood all cases of pregnancy occurring outside the uterus. This accident or anomaly of pregnancy is of very serious import to the mother and practically all children die.

The danger to the mother is from hemorrhage due to rupture of the tube and separation of the placeuta.

The point of attachment of the placenta in the tube is of great moment to the mother. When implantation takes place on the upper surface of the tube and rupture occurs the haemorrhage is so violent that life is soon destroyed as there are no structures to exert pressure on the bleeding vessels.

When the attachment of the placenta is on the floor of the tube and rupture occurs pressure is exerted against the floor of the pelvis and the woman escapes present danger. Rupture takes place between the scond and fourteenth week. It occurs earlier when the placenta is attached to the upper surface of the tube. When the placenta is attached to the floor of the tube rupture may occur through the upper surface and the fetus be extruded into the abdominal cavity and go on to full time.

The diagnosis of extra uterine pregnancy is by no means easy. When a married woman in the child-bearing period complains of serious derangement of her menses without assignable cause, has pain on either side of the uterus associated with amenorrhea or metrostaxis with expulsion of small bits of deciduae her case should be thoroughly investigated and if undecided, closely watched until a correct diagnosis is made. In some all the usual symptoms of a normal pregnancy may be present and in others nothing will occur to cause the woman to believe she is pregnant until rupture takes place.

Pain as a symptom is variable as to its presence and diverse in character and in some only amounts to that ill-defined sense of uneasiness often complained of by women normally pregnant.

Vaginal examination shows a purplish hue of the mucous membrane, soft cervix and slightly enlarged uterus.

The Fallopian tube of the affected side will be enlarged and lying slightly posterior to the uterus.

The diagnosis made, no time should be lost in its removal as every hour subjects the woman to the very grave dangers of rupture.

Appendicitis, strangulated fibroids or those interfering with the normal develop-

ment of pregnancy should be subjected to the same surgical treatment as in the non-pregnant woman.

Cancer of the uterus demands hysterectomy without reference to the stage of pregnancy.

ECLAMPSIA.

There is but one other complication of pregnancy comparable to eclampsia and that is haemorrhage. Both are sudden and often fatal. The majority of cases of eclampsia occur before or during labor and practically all cases of haemorrhage after. Nothing so terrorizes a household and spreads so rapidly in the neighborhood as the report that a woman in labor is having "spasms."

Eclampsia may occur as early as the fourth month of pregnancy or as late as two weeks after delivery.

For convenience of study eclampsia may be classified according to the period of occurrence into that of pregnancy, labor, and the lying-in state. It is characterized by convulsions of the entire body and loss of consciousness, followed by coma of greater or less duration. Owing to its frequency, the disagreement of authors as to its etiology, the diversity of opinions respecting its management and obstetrical treatment, the subject demands the earnest consideration of every physician.

If counsel can be quickly secured it should be immediately summoned in order that the rsponsibility may be divided and material assistance rendered if such be necessary.

In reference to its frequency statistics vary greatly but in the experince of the writer eclampsia occurs in about one in 150 of all cases of pregnancy. At the present time I think the per cent of cases would be greater were it not for the fact of more careful supervision of the patient and the induction of abortion or premature labor as a preventive measure.

As it is well known convulsions occur more frequency in primipara, the proportion being about 80% of all cases or even greater. The mortality is from 25% to 50% owing greatly to the period of occurence. The highest death-rate occurs in cases coming on during labor. This statement may seem to be invalidated by some statistics which apparently give the initial convulsion during pregnancy but fail to state the length of time before labor is declared.

As every practitioner of experience knows premonitory labor in primipara usually begins from four to six days before actual labor commences. It is in this period that the large majority of cases of eclampsia classified as developing during pregnancy occur, when in fact they should belong to the first stage of labor.

Pregnancy is a natural and normal process and when the physiological conditions are maintained all goes well, but when we consider the many changes which take place in the whole economy of both mother and child we realize that the organism of the former is placed at a disadvantage in maintaining its physiological equilibrium. Deficient elimination by over-taxing the excretory organs produces an auto-intoxication. The principal toxic element appears to be an acetone producing an acetonuria manifested by epigastric distress, headache, disordered vision, and dysuria with in the majority of cases, more or less albuminuria.

Formerly it was thought that all cases of eclampsia in the pregnant woman were preceded by albuminuria and that all women having albumen in the urine were very liable to convulsions but this has been proven fallacious. It appears that the albuminuria is due to the irritation and sub-acute inflammation of the tubules of the kidney in an effort at elimination of the toxic elements circulating in the blood.

Acetone and aceto-acetic acid are decomposition products of albumins.

Acetonuria may result from an excessive use of animal foods. This state may give rise to restlessness, excitement, insomnia, and even delirium. These are increased by the use of alcohol. It is conceded by all authorities that the use of alcohol in any form and a rich nitrogenous diet should be strictly avoided by pregnant women, as both render them more liable to eclampsia. In this appears a reasonable explanation of the good efforts of a bland non-stimulating diet.

That the digestive tract is primarily responsible for eclamptic seizures appears to be accepted by skilled clinicians.

Thorough disinfection of and drainage of the system through this channel is the preventive measure recommended, and is the accepted treatment when the convulsions have occurred.

Not only acetone but other toxins and aceto- acetic acid are formed in the disordered digestive tract which being absorbed and distributed through the system by the circulation interferes with tissue metabolism which in turn throws imperfect retrograde products into the blood, the excretory organs are obtunded, retention in the system occurs producing in the over-burdened and susceptible eclampsia.

In this way a vicious circle is established. In this circle the role of the liver is an important one. Nearly all the products absorbed from the digestive tract as well as the blood from the spleen pass through the liver. Failure of this organ to perform its functions in the metabolic process results in more or less systematic toxemia. Evidence of the disturbed function of the liver in pregnancy is afforded by the slightly jaundiced or tawny hue of the skin and sclerotic coat of the eyes in the early stages and lately Sir Johnathan Hutchinson has shown that the brownish patches on the face are due to a deposit of fatty matter derived from the liver thus confirming the observation of the laity as to the origin of "liver spots" in pregnancy.

Post-mortem, in women dead from eclampsia we find much the same condition of the liver as occurs in the kidneys—from a slight fatty infiltration to acute yellow atrophy and complete disorganization.

Those who have sought to establish the bacterial origin of the cause or causes of eclampsia have so far failed in their task and at present there seems no reason to believe that their efforts will be any more successful in the future.

The part played by the thyroid gland in the production of eclampsia has recently been prominently brought forward by the study, observation, and experiments of Lange. Physiological enlargement of the thyroid occurs at the fifth month in primipara and at the sixth month in multipara. The function of the thyroid is in the same way connected with uterine and foetal metabolism. In twenty out of twenty-five cases of pregnant women observed by Lange in whom physiological enlargement of the gland did not occur albuminuria and convulsions developed.

This causative view of eclampsia is taken by Herrgott who likens the condition to myxoedema. If this theory is substantiated the rational administration of thyroid extract would be a physiological prophylaxis.

The role played in the development of eclampsia by constipation is an important one inasmuch as it is directly concerned with the development of toxins which are absorbed, carried directly to the liver, and pass into the general circulation.

In this respect there is considerable resemblance to the intestial factors preceding and complicating epileptic seizures. It is sometimes surprising how much putrid faecal material the bowels contain, and especially the colon although the woman may have apparent normal evacuation daily.

The condition of the kidneys during pregnancy was formerly held to be the key to our knowledge of the cause of eclampsia as expressed by albuminous urine, but the changes incident to the elimination of albumen is now known to be but one expression of a general toxemia.

The condition of the kidneys of pregnancy is not one produced by inflammatory changes but in which is present a fatty infiltration of the epithelial cells lining the uriniferous tubules.

Chronic nephritis complicates pregnancy in a few cases and acute nephritis may be initiated at this time. The condition of the kidney of pregnancy returns to the normal soon after delivery but that of nephritis either acute or chronic pursue the usual course of the disease.

The changes in the kidney of pregnancy are due to the circulation in the blood of imperfectly oxidized metabolic products and the efforts of the kidneys to eliminate them.

Albumen does not appear in the urine until the kidney is so overloaded and damaged, and its function is so impaired that insufficiency ensues.

Normally the urine of pregnancy is increased in amount and its specific gravity is lower.

Albumen in the urine is an indication of an irritated kidney and one in which its function is becoming impaired, and associated with tube casts and diminished secretion of urine assumes a condition of grave importance in the pregnant women. The time of the appearance of albumen in the urine is of clinical importance, and it has ben shown to be present in one-third of all cases during labor.

The character of tube casts associated with albumen is of importance from a prognostic point of view. Hyaline casts are found in practically all cases during the last half of pregnancy and are probably due to the increased abdominal pressure interfering with the renal circulation, and are without significance; but albumen associated with fatty, granular or waxy casts and diminished secretion of urine is of very grave importance. In examining the urine for albumen it is well as Polak has pointed out to use that drawn by the catheter as many women have leucorrhea and this discharge mixing with the urine as it is voided will mislead the physician.

As indicative of the systemic condition of the pregnant woman the amount of urine passed and the per cent of urea it contains are probably the most important guides. A healthy woman in a normal pregnancy should excrete about 60 oz. of urine in 24 hours, containing from 1¼ to 2½% of urea. When the amount of urea falls to or below 1½% it behooves the physician to be on his guard and institute prompt measures to increase elimination.

In some fatal cases parenchymatous degeneration with thrombi and necrotic areas are found in the liver, lungs and kidneys.

These are attributed to a fibrin forming ferment in the blood from a retrogressive metamorphosis of the albuminates.

The condition of the mother causing albuminuria is often serious to both herself and child other than the danger of eclampsia as it renders her liable to haemorrhages, edema of the lungs and acute anaemia, and is often fatal to the child through placental haemorrhage. The same lesions are found in the child as in the mother and it frequently has the same eclamptic seizures soon after birth. When the child dies in utero, albuminuria in the mother ceases as it does soon after delivery.

The kidney of the child before birth practically excretes no urine and the products of its metabolism circulates in the blood of the mother and child, and after birth the effort of the kidneys of the latter to eliminate the retained toxins produce the characteristic lesions of these organs.

The part played by metabolism in the child producing toxins which circulating in the blood of the mother, and causing in her the characteristic lesions and resulting eclamptic seizures is a phase of the subject which is receiving great attention by all observers. Much clinical and practical evidence can be adduced in support of this view.

Practically all cases of eclampsia occur from the fifth to the ninth month and the greater majority in the last two months. This is the time when foetal metabolism is greatest. Then 80 to 90 per cent occur in primipara, and over 20% of the remainder in plural pregnancies.

Primipara have not the immunity conferred by a former pregnancy to the toxins, and in plural pregnancies a much greater amount of the foetal toxins are thrown into the maternal circulation.

With the death or delivery of the child the symptoms in the mother subside if her blood and excretory organs have not been damaged beyond repair.

In eclampsia in multipara the failure of immunity only proves an exception to a general law exemplified in most infectious diseases.

POSTPARTUM HAEMORRHAGE.

Postpartum haemorrhage may be said to be the most alarming accident of parturi-

tion, coming on as it does without warning during or just after the completion of the third stage of labor the physician is confronted with an emergency second to none in medicine or surgery. Prompt action guided by a clear head can only avert a tragedy of nature.

I think postpartum haemorrhage should be restricted to bleeding from atony of the uterus from any cause. Some would include that coming from traumatic lacerations of the parturient canal but this should only be regarded as an incident as any other traumatic haemorrhage might be.

Any condition preventing uterine contraction or compression of the vessels in the placental area disposes to postpartum haemorrhage. Among the more common causes may be mentioned rapidly succeeding pregnancies, want of exercise, metritis, or endometritis, twins, the presence of a tumor in the uterus, albuminuria and extreme mental depression.

It is claimed by many that the administration of chloroform disposes to haemorrhage and I am inclined to this view.

In some cases we may be led to suspect haemorrhage after delivery by the sharp short pains, a pulse of low tension keeping rapid toward the end of delivery, and an indescribable restlessness on the part of the patient. In this particular I think experience and observation count for good in the practice of the obstetric art. The more one has to do in this line of work, the more accurately can he judge of its probable occurrence and hence institute measures to prevent it and herein lies its most effective treatment.

Two measures should be adopted in every case of labor—proper management of the third stage and never to deliver in the absence of pains.

In a suspected case early rupture of the membranes is an important prophylactic measure, as it relieves distension of the uterus considerably and increases its contractile power. It also relieves to some extent intra-abdominal pressure and in this way lessens irritation and shock and liability to paralysis of the abdominal sympathetic nervous system.

OBSTETRICS IN COUNTRY PRACTICE.

BY GEO. E. LYON, M. D., TOLEDO.

Mr. President, and members of the Aesculapian Society. Obstetrics is the branch of medical practice that appeals most strongly to the country practitioner, as it is in his obstetrical work that he either makes or mars himself in a community. It calls for the treatment and directing of the expectant mother from the time of conception until she has passed the puerperal stage.

My idea is not to advance new theories in the treatment of the mother or the management of labor, but to give a general summary of obstetrical practice with the hope that I may encourage a more general use of the aseptic treatment of the mother in this the critical period of her life when she brings forth a new born babe.

In my first experience in obstetrical practice, as a student under Drs. Earl and Yarows, amid the filth and dirt throughout the slum district of Chicago, not a case of sepsis developed. This result led me to the belief that these perfect ends were due entirely to the fact that soap, water and bichloride were used in abundance.

Our first care is to the expectant mother. The urine should be examined monthly from the third to the seventh month, and then every two weeks until gestation terminates, in this way watching the kidney action, and combating any tendency to a dropsical condition.

The general health should be looked after, and the digestive tract kept in as good condition as possible. For two weeks prior to confinement, the breasts should be systematically massaged, and bathed with 95% alcohol and tannic acid, night and morning in this way toughening the nipples, and preventing caking of the breasts.

The expectant mother should be advised to avoid crowded or over heated buildings, riding over rough roads, and all forms of excitement.

In a large percent of country obstetrical practice, the doctor is not informed of the coming event until the horse, lathered white, stops at his door, or the telephone calls. So we must be always ready for this class of patients who are less fortunate, but no less deserving of our care.

A large well appointed obstetrical bag should be kept continually in readiness and supplied with one or two pairs of forceps, one pair placenta forceps, two pairs of artery clamps, and one salt infusion set. One Kellog applicator, with a supply of elastic funis rings, is very useful. With these and a pocket case, containing scissors, needles, and suture material, you are then ready for any emergency, and will not be obliged to leave your patient to go after instruments left in the office. A Kelly pad, a fountain syringe and a good stiff nail brush are indispensible, and a chloroform inhaler is very convenient.

As to drugs; 4 oz. alcohol, 4 oz. chloroform, 2 oz. of a good grade of ergot, 2 oz. of carbolic acid solution, and a small can of vaseline in well corked bottles, should be carried in every case.

To overcome the possibility of infection from bedding or clothing, a well wrapped packet containing two large linen towels, a package of cheese cloth sponges, and if desired a surgical gown, sterilized thoroughly, and kept always ready. The gown is neat, clean, and at once pleasing to the patient, and keeps your clothing from being soiled. I keep packages like the above made up and sterilized at all times, and have felt much safer with my cases when using them.

In preparing for delivery, it is best to roll the sleeves up above the elbows, scrub the hands and arms thoroughly with soap and hot water, clean the nails, rinse out the pan well, and prepare bichloride solution, one to two thousands, and wash in it for five minutes, then the examination may be made. If time permits, the vulva and thighs should be thoroughly sponged off with the bichloride solution, the fingers should not be allowed to come in contact with any of the clothing or bedding before the examination is made. Make the examination as rapidly and thoroughly as possible and ascertain all the information desired with one examination, as frequent examinations are distasteful to the patient, and may introduce infection. After the examination is made, the patient should be encouraged with kind words, and directed how to use her pains to the best advantage.

When dilation is complete, she should be gotten on her back with a Kelly pad covered with one of the sterilized towels well under the buttocks and the other towel across the hips, in this way preventing the exposure which we find the average woman dislikes so much, and allow digital examination without the hands coming in contact with the bedding; and if the fingers are well trained and an acurate knowledge of the anatomy of the parts is kept in mind, no exposure is necessary unless forceps are used.

As soon as the pains get severe, allow the patient to inhale a few drops of chloroform from an inhaler or handkerchief, and keep it up in gradually increasing doses until the head is born. It dulls the pain and encourages her to work harder, as well as making the pains more regular.

If the perineum becomes tense and thin, apply pads wrung out of hot bichloride solution, and retard and elevate the presenting head. This may be done by placing the index finger in the rectum or by pressure upward on the head through the lips of the vagina. It is always best to allow the bag of waters to remain intact as long as possible as it assists complete dilation of the cervix and makes the second stage much shorter.

After the head is born the child's mouth should be wiped out and the finger run around the neck to clear the cord, if it should be impinged. Then the head should be lifted well forward and the shoulders delivered between pains, in this way avoiding the tearing that so often occurs at this stage.

The body and limbs slip out easily after the shoulders and the second stage is complete. The respirations should be started if they haven't already begun, and the cord severed, between clamps or ligatures, as desired, as soon as the pulsations cease and the babe wrapped in a blanket or shawl.

The placenta may be easily expressed by Crede's method, and the fundus massaged until it becomes hard. Traction on the cord should never be made as it is apt to pull the placenta down broad side against the cervix and thus make expulsion much harder. As soon as the placenta is expelled, a teaspoonful of a good grade of Ergot should be given.

The bed and mother should then be cleaned up and a sterilized absorbent cotton pad put to the vulva, a good well fitting binder applied around the mother, and a large pad pressed under it, well down against the fundus. Then cover her with plenty of bedding, put something hot to her feet, and direct her to remain quiet on her back.

The babe should be greased with oil or vaseline, rubbed dry, and the cord dressed, tied with a rubber band or ligature as desired, sponged off with alcohol, and covered with borated talcum and a sterilized gauze sponge, all to be held in place with a well fitting bandage. The eyes should then be washed out with a saturated solution of boracic acid, and in all cases where there is a suspicion of venereal disease, a few drops in each eye of a 2% solution of nitrate of silver will eliminate the possibility of ophthalmia neonatorum.

To develop the sucking reflex and keep the babe quiet, it should be put to the breasts every two hours, beginning as soon as the mother has rested. This also facilitates the early, plentiful flow of milk. A little sweetened water given every two or three hours will aid the action of the kidneys and satisfy the infant until the milk comes.

A visit should be made within twenty-four hours and a careful examination of both patients made; the condition of the fundus ascertained, the bowel, and kidney action looked after, and minute directions as to the care of the baby given. The mother's binder should be rearranged well over the fundus uteri and the amount and character of the flow noted, as well as the amount of urine passed, and a mild laxative given.

The things I would have you keep in mind are these:

Be surgically clean.

Go equipped for all emergencies.

Make the patient as comfortable as possible.

Be kind and considerate of the patient's feelings; and don't get in a hurry unless there is great hemorrhage or danger of fetal strangulation.

CHRONIC PNEUMONIA.

BY N. C. IKNAYAN, CHARLESTON.

During the last decade 20-30% of all cases of pneumonia terminated fatally. The total death rate has risen from 12 1-3 for each 10,000 during the decade previous to last, to 18 for each 10,000 during the last. Beyond doubt the record of the present decade will show substantial increase over the last.

Sanitary improvements have put an effective stop to the ravages of plagues, tamed many diseases. Progress in medicine, pathology and bacteriology has made possible for us to rationally understand many diseases and prevent or effectively treat them. Pneumonia seems to be one of the exceptions. It is respector of no climes or conditions. It seems to thrive on agencies that are effective checks on other diseases. Either we are passing through a high tide of virulency in pneumonia or our knowledge of the disease is superficial and incorrect and our methods are based on fallacies. It is clear that there are new avenues to be explored and newer methods to be tested.

The aim of this paper is not to discuss the permanent tissue change, fibrous degeneration, contraction and eventual obliteration of alveoli or dilatation of bronchioles, resulting in bronchiectesis and lung abscess, and

other changes described in books on the subject. They are interesting pathological conditions, yet the study of these morbid processes though pushed to their legitimate limit, have yielded no practical outcome. We must take a broader view of the subject in order to arrive at conclusions that might at least be suggestive of probable effective measures in prevention and cure of this dread disease.

What is pneumonia? It is an inflammation if you define inflammation as reaction of tissues to morbid stimulation.

It has been definitely demonstrated that both lobar and lobular pneumonias are caused by certain germs.

A brief sketch of the life history of these bacteria in their relation to pneumonia may throw some light in the direction our quest should be guided.

Diplococcus of Frankel, or micrococcus lanceolatus is considered to be the cause of the great majority of cases of pneumonia. This organism multiplies best in blood serum at the body temperature, but it may exist at as low a temperature as 65° F. It thrives in human saliva meanwhile losing its virulence which promptly returns if medium is changed to pneumonic sputum or blood serum.

Under ordinary conditions it soon loses its virulence and shortly after dies, although it has been demonstrated to survive four months in dried sputum and blood. It is generally conceded that its life outside of human body is precarious but once lodged in human air passages it may outlive its host.

Streptococcus pyogenes is believed to be the cause of some cases of pneumonia. Typical streptococcus pneumonia is lobular. It is cellular and often not fibrinous. Some firmly believe lobar pneumonia can be caused by this organism, others account for it on the theory that great infiltration accompanying a case of streptococcic pneumonia will make it appear as lobar. In subacute and chronic stages it resembles pulmonary tuberculosis. In a case of streptococcic pneumonia the disease is apt to terminate gradually with occasional exacerbations, delayed resolution, frequent, quick and soft compressible pulse, irregular temperature simulating a case of pulmonary tuberculosis, complicated by pneumonia which abating leaves the original tubercular process to run its usual course.

Streptococcus pyogenes has been known to survive in dried pus from 14 to 36 days. In ordinary surroundings, it loses virulence and dies in a short time. In human body, especially in the air passages it endures indefinitely. The media and temperature is favorable to its propagation, only defensive agencies of human system in health, acting as check on it.

Third important factor in production of pneumonia is influenza bacillus. This is a factor not to be despised or dismissed lightly. May not the great prevalence of la grippe have a leading part in increasing the fatality from pneumonia. La grippe should be regarded as a serious disease leading into more serious ones. This vampire sucks the nervous vitality, reduces the resistance to disease, sets up a catarrhal inflammation in the upper air passages and bronchi and help break down the defenses of bronchioles and alveoli. More than that, this breaker of defenses is also capable of setting up pneumonic inflammation, a cellular lobar pneumonia. This statement is made upon the authority of Pheifer, Chiari, Neisser, Meunier and others. These same writers are also of the opinion that most of the influenza pneumonias are caused by streptococci.

Influenza bacillus forms no spores, is very difficult of cultivation outside of human body, drying and unfavorable media, for instance water, destroys it in a short time. The conclusion that for the yearly abundant harvest of influenza cases human race is indebted to itself, seems to be justifiable. Influenza baccilli could not survive the outside influences from one winter to another.

Freidlanders pneumobaccillus is considered to be the causal factor in a small percentage of pneumonias 3-5%. However the tendency to consider its presence accidental is gaining ground.

Diphtheria bacillus, bacillus typhosis and staphyloccoccus have caused pneumonia. This happens only rarely and its real nature not undisputed.

From the foregoing brief sketch, the following deductions are more or less justifiable.

(1) All these bacteria are adversely influenced by sunlight, water and drying. Some retain vitality some length of time, but only in most favorable media, for example, blood and pus.

(2) These organisms live and thrive in human air passages. Some bacteriologists assert that pneumococcus is present in the mouth and nasal cavity of all healthy persons. Netter found it to be virulent for animals in about 20% of healthy human beings.

(3) Great majority of acute pneumonias are auto infections, in the sense that the patient harbored the cause of the disease within himself for an indefinite time, maybe for years. In many cases it manifested no symptoms, in others there were catarrhal symptoms, bronchitis and some expectoration. These signs of activity gave warning of the stealthy advance of the enemy. Activity of ciliated epithelia which sweep out all foreign substances is gradually lessened by inflammatory reaction caused by their presence or conditions favoring their development. Some day, an exposure, a digestive disturbance, exhaustion from overwork, any disease that has acted as drain on bodily vitality weaken the defenses and infection of alveoli follows, which manifests the group of symptoms, that are considered evidences of acute pneumonia.

Direct inhalation and metastatic pneumonias occur but rarely. All cases of bronchitis, all catarrhal conditions of air passages, chronic cough with expectoration which are due to presence of pneumococci, streptococci, and influenza baccilli must be regarded as chronic pneumonias. These cases are many, and our experience teaches us to suspect them as forerunners of acute pneumonia.

When we call a disease chronic it may mean that it has followed an acute attack, or it has preceded one or there has been no history of acute attack.

As illustrative of some of the points made above I will cite brief histories of two cases.

S. F. Age 24, consulted me latter part of last September on a cough he has had for last 10 years or longer. This had been greatly aggravated. He wanted to know if he had tuberculosis. My answer was, no. This satisfied him and he returned to his work. His cough steadily grew worse, he abandoned his work with the intention of trying the beneficial effects of Arizona climate. He was expectorating profusely, sputum greenish and thick. Bronchial breathing marked at the apices tympanitic resonance on upper lobes, cog wheel respiration audible in several spots. He lacked the quick and compressible pulse of tuberculosis or rather mixed infection. Temperature normal.

A microscopical examination cleared the case. Sputum contained pneumococcus of Frankel in great numbers and almost to the exclusion of other microorganizms. Diagnosis chronic pneumonia. Treatment, cod liver oil, tonics, and creosote carbonate. A second and third microscopical examination confirmed the first. Patient could not expectorate enough for another microscopical examination after the fifth week. At the end of three months lungs were normal and patient had gained several pounds. There has been no return of symptoms since.

Miss B. M., 20 years old. Was taken with a severe chill on Jan. 3, 1904, followed with high fever and intense pleuritic pain in her left side. It developed into a case of lobar pneumonia, expectoration was abundant and blood tinged for several days but it was not fibrinous. The temperature did not have the regularity of pneumococcus pneumonia. The physical symptoms in general were those of lobar pneumonia. At 2 a. m. on the fourth day, patient had another chill and day after at about the same time still another. The third chill was followed by a temperature of 107° F., which was reduced to 103 3-5° F.

by a cold water bath. From this time on temperature declined with only occasional exacerbations until on the 10th day it reached 99° F. Pulse 120, respiration 48, expectoration profuse and mucopurulent. On the 14th day the temperature began to go up, expectoration increased, severe paroxysms of cough entirely exhausted her, pulse went over 130 in recumbent position, she was greatly reduced in flesh and strength. Symptoms showed no sign of abating until the end of the fifth week of her sickness. At this time on inspection it was plain that upper part of chest on left side was sunken, percussion note high pitched, marked bronchial breathing, expectoration profuse, pulse about 120, respiration 37, temperature about 101° F. Improvement was slow but steady. Present condition: temperature-normal, pulse 77, no cough, no expectoration, resolution has progressed so far as to allow normal expansion of lungs and thereby obliterate the depression on left apex. Patient has regained her usual weight and strength. The respiratory murmur is still somewhat harsh and louder than normal. The manner in which this case has progressed promises complete return to normal state within next few months.

She gave a history of cough and expectoration extending over three to four years. The case was strongly suggestive of tubercular infection. I have looked diligently for tubercle bacilli. Four microscopical examinations gave negative results. Predominating bacteria were streptococci. Might we not consider this an acute pneumonia both preceded and followed by chronic pneumonia.

With a few practical inferences, I shall conclude my paper.

(1) We should remember that the farther inward, pneumococci, streptococci, and influenza baccilli move in the air passages, more virulent they become. Their virulence is a matter of medium in which they find themselves. Thus the importance of strict asepsis of mouth, pharynx, and nasal cavity becomes evident.

(2) It is the experience of many among us that a person with chronic bronchial inflammation is in greater danger of contracting pneumonia with smaller chance of recovery, than the person without it. We should become familiar with the bacteriology of bronchitis, so that we may be able to distinguish the pneumonic classes from the others, and treat them more rationally.

In the treatment of these cases the most effective remedies are creosote, guaiacol, ichthyol, cod liver oil and tonics. There is very little benefit derived from expectorants. In obstinate cases of streptococcic infection the effect of streptococcic serum is being favorably reported.

POSTERIOR COLPOTOMY, AND IODOFORM GAUZE PACKING IN THE TREATMENT OF PUERPERAL SEPTICAEMIA.

BY W. E. BELL, M. D., TERRE HAUTE, IND.

No post-parturient condition is more alarming than puerperal septicaemia, and I venture the assertion that no condition of equal gravity is more absolutely under our control. In fact, it is my belief now, that, with timely treatment, rarely will we have a death from septic infection through the parturient canal. I was not converted to this happy view of the high efficiency in the iodine treatment of this grave poisoning at once; and could only accept it with the profoundest doubts, until through experience and actual observation I had worn away every bristle of prejudice and distrust.

I am convinced that to install this treatment as a routine practice in septic cases of term deliveries or premature exigencies, our convictions must be firmly rooted and domineered by a dauntless courage leading to the purest honesty of purpose. To invade the peritoneal cavity has for so long been held up to us as a most hazardous step, that we are still somewhat in awe. And to boldly expose this long-attested sacred cavity, before the eye is able to detect any pathological changes whatever there, calls for a reach of courage which must germinate in strong convictions. It must be thought of in much

the same light as the destruction of buildings ahead of a conflagration, that the city as a whole may be saved. Our devastation is between the human and the invading pathogenic organisms.

Primarily, in all cases, we have the fountain head of the poison within the uterine cavity, and from this center the infection travels into the body of the uterus, out the lympathics between the layers of the broad ligaments, and if not checked, beyond the uterine and annexal vascular and lymphatic systems to the lumbar lymph spaces and pelvic veins, on into the thoracic duct and into the general circulation.

Just what the specific cause of trouble in a given case may be, we are not always able to differentiate, and from practical maneuvering it is not at all essential that we know. It is claimed that poison arises from decomposing decidua in the uterine cavity, from some septic material introduced by the obstetrician, or by gonorrhoeal infection. But we have all known of large pieces of deciduous membrane having remained within the cavity for weeks with no ill effects. So also, have we known of cases of gonorrhoea passing safely the puerperium; and perhaps none of us will be so arrogant as to presume that no genital tract was ever polluted by our examining or manipulating hands. Any retained decidua, of course, makes a case more susceptible through an attractive pabulum in which mischief-making organisms may thrive; and unclean hands should never come in contact with the genital mucosa at this crisis. But I am not, and never have been satisfied that puerperal casualties are wholly preventable, even with the most precise and elaborate precautions. We who have many times bowed our heads in sorrow over cases of labor which have shown up sepsis subsequent to our attentions, may now take comfort from recent microscopic research, which has demonstrated that many forms of virulent micrococci and bacilli are more or less indigenous in the vulvae and vaginae of pregnant women. And while this should not, and must not cause us to relax our vigilance, yet it takes some of the bitter from our cups.

Dübendorfer claims to have found streptococci in 72 per cent of vaginae during gestation, and colon bacilli in 48 per cent. Franz makes positive statements that he found both strepto—and staphylo—cocci with colon bacilli in the uterine cavity of afebrile puerperae. This being true, it would seem, that strictly speaking, it must be impossible under any management to part company with all our obnoxious microscopic guests; and just why they at times see fit to invade the tissues with such disastrous results both mortally and morbidly, we are as yet unable to say. It may perhaps come through an acquired immunity gained through a sort of a symbiosis, as the streptococci and the staphylococci are frequently found in the healthy body, in the mouth, nasal cavity, vagina and cervix, in which individuals certainly the germs find suitable food for maintenance without in any way disturbing the normal equipoise of the organism in which and upon which they live.

I admire precise technique and I admire men who practice it and give to us the results of their laborious work. But I deplore the necessity of having at last, after having learned it through, to bundle it all into the homely budget of practical manipulation. How humiliating it must be to study the various cocci and baccilli, acquaint ourselves with the docility of some and the viciousness of others, and then to find the most benign at times becoming mad with desire for destruction, then to stand in open-eyed wonder at a colony of the most virulent holding sweet and serene commensation with uterine involution in the afebrile puerperae!

We are compelled then to say that under certain stimuli the streptococci in the uterus play the inert role of saprophites, and under other stimuli become carnivorously parasitic. This is what it means and resolves itself into that if 72 per cent are streptococcic and stapholococcic laden, with only one-half of one per cent of all cases of delivery showing any ill effects, we are well nigh forced to conclude that the remaining 28 per cent carried something like the same load of germs which escaped capture, and at last

we have puerperal septicaemia arising from predisposition and improper drainage, just as we have septic absorption in any field where there is traumatism and solution of continuity.

From what I am able to learn through recent literature, a sterile intra-genital field is an impossible goal—an asymptotic approach to a puerperal arcadia. This fact makes it all the more essential that our conduct in the lying-in chamber be as perfectly aseptic as possible; but with the greatest care intrinsic sepsis may thwart our most exhaustive plans.

The gonococcus seems to have a predilection for the uterine and tubal mucosa, and rarely passes beyond. Therefore its ravages are more prone to remain localized in the pelvic cavity. The streptococci are the most rapidly invasive, and often pass the uterine borders in from two to three hours, following principally the lymphatics. These, from the body of the uterus pass laterally between the layers of the broad ligaments and join others from the ovaries, fallopian tubes and broad ligaments; they accompany the ovarian artery as far as the lumbar glands, into which they empty. It will be seen that the streptococci with their ability of rapid mobilization, soon have the system in a profound condition of septicaemia. Thrombi in the uterine sinuses become infected and we have added to a lymphangitis, a thrombo-phlebitis. If this condition is allowed to continue and the patient survive for a sufficient length of time, it will be found that the body of the uterus is a mass of multiple pus cavities.

We are unable to tell in the inception of any case whether we have to deal with a malignant septic attack or not, and if we wait to be convinced by clinical tracings, we are very apt to see our knowledge gained through embarrassment of a mortuary nature. Symptoms of a septic character usually appear on the third or fourth day after delivery, in a rise of temperature with or without rigor. Other cases will run almost an afebrile course to the tenth or eleventh day and then give trouble. It has not been my experience that most of the cases are ushered in with chills. On the contrary, I am sure, I have only noted a more or less sharp rise of temperature, without a chill. The temperature will range from one hundred one, to one hundred and five or even higher in susceptible cases. Do not depend upon fetid odor as pointing to sepsis in the cavum uteri. More often there will be no odor at all, and certainly there will be none as a result of lymphatic and venous involvment. Odor comes only from decomposing deciduous membrane or clots, and all this may have been thrown off, and the lochia, if any at all, be entirely free from any offensive odor. On examination of the pelvis, the uterus may be found tender, with tenderness along the broad ligaments, on one side or both, and usually, if there is not too much rigidity, the index finger within the vagina, will detect a nodular condition in the post-uterine and annexal spaces, due to enlarged lymphatic glands. Tenderness may be elicited over the lower abdomen, and some distention noted, but do not wait to be guided by this, as it is caused by the very extension we wish to avoid. I have regretfully reasoned away some very valuable opportunities through the false guidance of absence of these classical symptoms, and hopefully pursued conservatism to inevitable destruction. When confronted with a case of septic absorption taking place at the placental site, deal with it as you would deal with sepsis any place else in the body—endeavor to render the wound sterile, to give ample drainage and arrest further progress. If poison developed in a recently amputated leg, you would open the wound, cleanse it, drain it, and appeal to nature for restoration. In puerperal septicaemia the general conditions are no different, the parts but little less accessible, and more easily sterilized because of the great absorbing properties of the tissues surrounding.

It is highly essential in these cases that great vigilance be exercised on account of the rapidly developing poison, and the danger of too profound systemic saturation. In the presence of an elevated temperature, coming on from two to three or four days, or

even ten days after delivery, careful research should be made at once, to ascertain the cause. If no cause can be found outside of the uterus, then pay your attentions to it, and do it boldly and persistently; for a few hours may place your patient beyond help. I think, after careful examination, and satisfying yourself that the cause of mischief is within the uterus, it is our duty to at once begin active treatment. Two initial steps are advised by men high in authority: One the irrigation of the cavity with some antiseptic solution, with or without subsequent packing with gauze, the other curettment and packing. To my judgment the flushing is an unfinished and unsafe practice. If the pyrexia be a sapraemic condition, as a result of simple saprophitic activity, the irrigation will hardly suffice to remove the retained secundines, and while a temporary recession of symptoms may be noted, the decomposition will likely condition be due to parasitic action and the tinue with a return of trouble. If the conmucosa be attacked, it is not rational to think that the irrigating medium may find and destroy the germs. I have witnessed some very alarming manifestations following the intra-uterine douching, and I have abandoned it. The careful curetment will do all that may be hoped for from the flushing, and any decomposing membrane will be removed along with clots, and the cavity be left clean. Now by placing a packing of iodoform gauze and allowing it to remain for two or three minutes, then removing, bleeding, which is profuse, will be largely staunched, and the cavity may now be firmly packed again with ten per cent gauze which is left in. If at this time a septic metritis does not already exist, the temperature will fall within twelve hours to near normal, where it will remain with gradual descent to normal. If, however, the temperature and pulse remain high, it is unsafe to delay longer than twenty-four hours, at which time an incision should be made through the posterior vault of the vagina into the cul de sac, and the pelvic cavity snugly packed with five per cent iodoform gauze. At the same time, and preceding the colpotomy, any packing should be removed from the uterus, and a fresh pack placed there. After the colpotomy and pelvic packing, the temperature will drop within from one to six hours. This almost magical descension of pyrexia was recently observed by me in a case operated upon for Dr. Baldridge of Rosedale, Indiana, in which, at the time of the operation, the temperature taken hastily in the axilla by the doctor while I was preparing my instruments, was 105 and the pulse 140. One hour after the colpotomy and placing of the packing, the temperature taken per rectum, showed 103 and the pulse had dropped to 100.

Iodine will be found in the urine in from two to six hours, which demonstrates the rapidity and extent of its absorption. The uterine packing should be removed in from three to four days, according to symptoms, and left out, but the gauze in the pelvic cavity should be left undisturbed for from seven to fourteen days, when it should be removed and a fresh packing substituted, of not quite the volume of the first. This should be left about one week, at which time, if a condition of apyrexia exist, a very light packing of iodoform or plain gauze, just through the cul de sac opening, may be kept up for one week, when all gauze may be discarded, and the vagina kept irrigated with saturated solution of boracic acid until the vault has entirely healed.

The operation of going through the posterior vault of the vagina into the cul de sac, is by no means difficult. The patient is placed upon a table in the dorsal position, with the hips well elevated. After anaesthesia has produced relaxation, the thighs are flexed well upon the abdomen by assistants. Mop out the vagina thoroughly with gauze saturated with bichloride solution, 1-2000. Now with a broad retractor, pull the perineum well down, when the fold between the vagina and cervix will be readily visible. I use a sharp scalpel,—although some advise the use of scissors,—making a slightly curved incision, well through the mucous membrane, corresponding to the cervico-vaginal fold, and in extent about two inches. A slight dissection now will carry

you to the peritoneum, and by rolling it over the posterior wall of the womb, the uterus being well pulled down by volcellum, you will convince yourself that the rectum is well out of the way, and that there are no adhesions of intestines to the dependent part of the cul de sac. This settled, there is nothing to fear. Now draw the tissues taught by spreading the index and middle fingers antero-posteriorly, and with the scalpel cut through close to the uterus, stopping with a small incision and continuing it by tearing laterally with the fingers, which will be easy if the incision in the mucous membrane has been ample. It is now a matter of ease to palpate the uterus and its adnexae. In the early stages no agglutination will be found, any more than you will find agglutination in fulminating cases of appendicitis, but enlarged lymphatics may be felt. With the aid of long retractors, and a proper instrument for pushing the gauze into place, the cavity is now thoroughly packed, placing it well into either side and posterior to the uterus. From seven to fourteen pieces are placed in position, each piece being six to eight inches wide and one yard long, folded the short way, and placed side by side, making sure that the upper ends are even with or slightly above the fundus of the uterus. The lower ends should not protrude from the vagina, and a self retaining catheter should be placed in the bladder and left there for from four to seven days, when it may be removed, and the attendant instructed to place a small ball of cotton well soaked with vaseline within the osteum vagina preceding each act of micturition, to insure against getting urine into the vagina and on the gauze. After the patient has completed the act of urination, the parts are cleansed with boracic acid solution and the cotton removed. This, I deem much better than to allow the catheter to remain in so long, as many cases will develop troublesome cystitis from too long presence of the catheter. If the temperature should remain low, the patient should be encouraged to sit up in bed after the second packing, as the sitting posture favors the most perfect drainage.

Both the abortive and parturient infections arise from such a host of causative factors, producing such a variable degree of local and systemic disturbances, that any classification of cases with respect to the period of gestation, must be individually arbitrary. I can see no essential difference between the post partum and the post-abortive infections. The conditions are the same in kind, the only difference being the larger area for absorption and the more highly vascular condition of the uterus at term, than in the ante-partum organ. But sepsis in one is no different from sepsis in the other, and should receive the same treatment. Aside from the consideration of pure mortality, we have to think of morbific conditions. It is well known that in these cases we have agglutinations, adhesions and distortions which frequently places the individual in a condition of chronic invalidism and sterility, through post-inflammatory changes about one adnexus or the other, or both, all of which, it seems now, may be avoided, by prompt and proper treatment.

Where it has been possible in each case, I have had Dr. C. N. Combs, of the Union Hospital staff, test the urine for the Diazo re-action, and he reports to me that he has found it always. While this test may not be of proven diagnostic value, I should advise its employment. I am told that it does not appear in the first hours of the infection, and therefore would not advise waiting for the urine to become charged with this peculiar chromogen which gives the peculiar reaction described by Ehrlich. It is claimed for it that, the reddish color band will only appear in the urine of septicaemia, septicopyaemia, typhoid fever and advanced stages of tuberculosis. But when it is present, you have one more link in the chain of evidence fixing the diagnosis of puerperal septicaemia.

Dr. William R. Pryor of New York, reports 37 cases operated upon. Torrens, 6 cases, Killebrew, (Mobile,) 2 cases, Brooks H. Wells, 8 cases, Dr. L. J. Weinstein 1 case. I have operated on 8 cases. This makes 62 cases, I am able at this time to collect. Eleven of these cases had been previously treated by other methods, three of which

died. The only death I had in my eight cases was in a young abortive subject, in which the attending physician informed me he had treated by "uterine mopping." She had suffered for ten days, and for forty-eight hours had dark emesis, and was profoundly septic. I operated as soon as she could be prepared after I saw her. The pelvic cavity was full of an ichorous fetid pus.

In fifty-one cases, in which the pelvic packing was employed earlier in the infection, all recovered except one, giving a mortality of less than two per cent.

From this it would seem that the most conservative must grant an advance in the proper management of puerperal septicaemia. Curetting alone shows a mortality of 22 per cent; antistreptococcus serum therapy, a mortality of 33 per cent; hysterectomy, a mortality of 55 per cent; and all trusted to medicine and nature's efforts, a mortality of 25 per cent.

Is there not a star of hope ahead in the iodine-colpotomy treatment of this most dreaded disease?

COUNTRY SURGICAL TECHNIQUE.

BY J. A. BAUGHMAN, M. D., NEOGA.

It is our purpose to demonstrate to some extent on our subject. It will perhaps be best to read uninterruptedly our paper and then demonstrate. Our experience has lain almost wholly in the rural districts, a prosperous farming community, an experience which has been reasonably full of surgical and consultation work.

During these years of toil we have gradually crystalized into a certain mode of surgical preparation which we have found practical in country practice, where often a long journey over dusty or muddy roads is necessary to reach the place of operation.

First the room in which to operate should be prepared if there is not the hurry of a great surgical emergency.

Tell those who prepare the room to select the best lighted one in the house. A homely expression that they will always execute quite well is "Make the room as bare and clean as a bottle."

After it is clean allow them to place therein a stove and two tables, the latter covered with recently boiled sheets.

That is your room, in which you can do most excellent surgery, work which no hospital can surpass. There is no doubt about this and you physicians who cart your patients away promising them more sanitary positions in crowded city hospitals are either wanting to slip your patient out of the community for selfish reasons or you have not yet learned that soap and water, antiseptics and the free air of heaven are capable of greater achievements in the country than in the foul cities.

You are either greedy or lazy and are trying to save your hide in either case, when you would fulfill the manliness of our art much better by bracing up and doing some creditable surgery at home.

Do not set up the plea of lack of instruments or impossible asepsis.

Here we show about all the instruments you need in a great variety of abdominal operations. Here we see all that are necessary for an amputation. They are cheap. They do not cost much more than a good horse. Their containing case consists of four towels. Shun a useless, dirty, cumbersome operating case. Your knives you protect by wrapping them in a little cotton as you here see.

Wrap the whole bunch in some towels and boil them in a weak solution of sodium carbonate to prevent rust and dissolve grease that may be on them. At your destination discard the first towel entirely. The second and third one may be used for antiseptic table covers, the fourth one being left over the instruments up to the moment of operating.

Of course it should be understood that your hands are clean and finally sterile before you touch the instruments themselves.

Now for your pans. You have about one dozen of different colors and sizes incased

in two sacks. They have been thoroughly boiled. You slip off the sacks when your hands are sterile and there you are, steril pans inside and out, they are safe, keep them thus.

Your solutions, a saturated solution of potassium permanganate, one of oxalic acid, and from two to four gallons of filtered or carefully strained water, should all be contained in bottles, in which they are carefully boiled for three hours. These bottles may be set in a wash boiler of water to be boiled and the corks and retaining protecting cloths you see over the neck of these bottles should should be tied fast to the bottle neck before boiling. The corks which are loose when the boiling is being done can be pushed into the bottle without being touched and when you reach your destination you can empty the solutions from the bottles knowing that the neck of the bottle is yet sterile and will not contaminate the solution passing through it.

The sterilizing of the hands and of the field of operation is with me very much the same.

Six pans are necessary for this process alone: 1st soap and water; 2nd potassium permanganate; 3rd solution of oxalic acid; 4th sterile water; 5th corrosive sublimate; 6th sterile water. Time for the hands 20 minutes and as much longer for the field of operation.

Gauzes, towels, gowns, caps, a sheet and silk sutures are packed in a package as you see here and prepared in an Arnold or Beckman sterilizer.

There is no need of taking the sterilizer with you. If you have arranged your bundle nicely the outside towels will do as table covers as in the case of the instruments.

In this small package you will see three gowns, three caps, one sheet, two dozen towels, silk sutures, a bunch of cotton and forty pieces of surgeons' gauze which we use for sponging, absorbent and dressing purposes.

Now as to a table. There is a most excellent folding, all iron table made by all our instrument houses that we can place in the back end of a 22-inch piano box buggy and transported for miles.

The cost of mine was $12.50. True two other instrument houses asked me $22.50 for the very same article on the same day I bought this one, but it is some times to our interests to deal with the bargain counter man. This table is a most excellent common sense article and will please you if you secure one.

We will briefly report three cases upon whom an operation was performed with the identical means or appliances here shown.

Mrs. L., Trilla, Ill., in the practice of Dr. H. B. Vavatta, age 55, past the menopause, well nourished for some two years had a gradually increasing tumor in the abdomen.

Diagnosis, ovarian cyst or uterine fibroid.

Operation Nov. 13, 1902, assisted by Drs. Vavatta and Little.

The uterus a fibro-myomatous mass of seven pounds with the ovaries and tubes was removed through an abdominal incision.

The patient made a rapid nonfebrile recovery. We believed our technique in this case good.

Case two. Mrs. B., Neoga, Ill., age 40, still menstruating, poorly nourished, the mother of four children, had suffered for years with exceedingly painful ovaries which were found small walnut sized fibro-cystic bodies. Her nervous condition for years had been pitiable. The appliances you see here were again used to remove ovaries and tubes. A very rapid nonfebrile recovery ensued. The abdominal incision leaving a mere line for a scar.

Case three. Mrs. E., a physician's wife, aged 20, had been suffering for about two years with a pyosalpynx. Operation in Jan. 1904. Her temperature on the morning of operation was 101, a degree lower than it had been for some weeks. A large pus tube which was very adherent was removed from the left side. The right ovary was as large as a very large orange and of a haematomus character. In fact it had some days before the operation liberated about a pint of blood into the pelvis. It was removed.

Her temperature never raised above what it was on the morning of the operation and in a week was normal.

These cases were all operated upon in their homes and were not under the care of a trained nurse, but common sense, obedient women attendants were found all sufficient.

Now then gentlemen this is in a manner a plea that when you go home and you have not already done so, prepare your selves with a few of the inexpensive necessaries we have here shown.

Keep them ready to clap on the gasoline stove, boil them from one-half to three hours according to the time you have, go to the country and do some surgery.

A certain knowledge of anatomy as a matter of course necessary. But study the position of the main arteries and you and a haemostatic forceps can easily take care of the smaller ones that you find as you sever them.

You can, if you will, by these methods keep the best part of your practice at home and reap the coin and honor for your own granaries.

ILLINOIS STATE MEDICAL SOCIETY.

Proceedings of the Fifty-Fourth Annual Meeting Held at Bloomington, May 17, 18 and 19, 1904.

General Session. First Day, Tuesday May 17, 1904.

The Society met in general session in the Unitarian Church, and was called to order at 9:15 A. M. by the President, Dr. Carl E. Black, of Jacksonville.

Dr. E. Mammen, of Bloomington, Chairman of the Local Committee of Arrangements, made a brief report on behalf of that committee. He stated that there was a little change made in the order of proceedings. The formal opening of the Society would take place that evening, in the Unitarian Church, at which time an address of welcome would be delivered by the Hon. A. E. Stevenson, representing Mayor George C. Morrison, and an address of welcome on behalf of the McLean County Medical Society, by President F. C. Vandervort. Response to these addresses would be made by President Black on behalf of the Society. Following the response to the address of welcome would be the delivery of the President's annual address followed by the address of Section One, by Dr. William E. Quine, of Chicago.

The Committee had provided places of meeting for the Sections; also ample space for the exhibits. The sessions of the House of Delegates would be held in the Illinois Hotel.

Invitations were extended to the members of the Society to visit the Illinois State Normal University, and the Illinois Wesleyan University, as well as the Public Library, and other points of interest.

It was announced that a banquet would be given Wednesday evening to the members of the Society and guests at Cooper Hall. Receptions for the visiting ladies were announced.

It was announced that the address of Section Two, by Dr. A. J. Ochsner, of Chicago, would be delivered Wednesday, at 11 A. M., immediately after the Symposium on Tuberculosis.

The general session then adjourned.

Re-convened Thursday, May 19, 12 o'clock noon, with President Black in the Chair.

E. Mammen, chairman of the Committee on Arrangements presented an incomplete verbal report of the work of his committee. He stated in substance that there would be no deficit.

It was moved by Will that a vote of thanks be tendered to the local profession and to the people of Bloomington for their hearty and kind entertainment of the Ilinois State Medical Society. Carried.

President Black took the occasion to express his hearty thanks and appreciation for all kindnesses conferred upon him during the past year by the officers and members of the Society. He then read a report of the House of Delegates of the officers elect.

He requested W. O. Ensign to escort President elect William E. Quine to the rostrum where with a few well chosen words he presented him with the gavel and to the Society as its President.

President Quine in accepting the gavel said in substance that he highly appreciated the honor that was conferred upon him, and that it would be his utmost endeavor to, during his incumbancy as President, do everything in his power, even at great personal sacrifice, to advance and further the interests of the Illinois State Medical Society and the Medical Profession of the State of Illinois.

Adjourned Sine Die.

Minutes of the House of Delegates.

The House of Delegates convened at 2 P. M., May 17, 1904, in the Assembly Room of the Illinois Hotel, Bloomington, with President Black in the Chair.

The Secretary called the roll, and it was shown that there were 29 members present, a quorum.

The first order of business was the reading by the President of his message to the House, in which were embodied many suggestions.

Introductory.

To the Members of the House of Delegates of the Illinois State Medical Society.

The difficulties of putting into operation a new constitution and by-laws will be apparent to you in the work this year. It has had many

irregularities and difficulties arising from re-organization, not only of this delegate society, but of each of its component county societies.

The task of conceiving this plan and seeing it in all its main features, so that the various existing units can be brought together without losing any of their unit vitality, and at the same time forming them into a harmonious and smooth working whole, is a task which will require several years for its completion.

During the year twenty-three new counties have been organized and have begun work in affiliation with this society. We now have local organizations in 93 out of the 102 counties of the State. In three instances two counties have joined together instead of undertaking to maintain separate societies.

The suggestions which follow are among those made to me from time to time during the year, and while they are not all expressions of personal opinion, they seem to be worthy of your consideration, and are presented to you for that reason.

Financial.

You may be disappointed at the number of members reported. Former estimates of the size of the Society were altogether too large owing to the duplication of members. For example, after going over the matter with the Secretary of Chicago Medical Society an assessment was based on 1,355 members, which was a considerable shrinkage over what the number was supposed to be, yet since the collections were made only 1,100 members have been accounted for, giving us nearly $500 less income than we estimated, and Journals have been sent to 1,355. Thus we see that owing to unavoidable shrinkage in former estimates of membership we have received fully 25 per cent. less from annual dues than was estimated when an assessment was made last year. Much of this shrinkage is only temporary and arises from the change of plan of making collections. Our local secretaries have not learned the work and the members have not become fully informed as to the new plan of paying to the local secretary instead of the State Treasurer. By the end of another year all this will straighten itself out and a large amount of these back dues will be collected. We should exercise patience in this matter and not be hasty in concluding that a member or a society do not wish to continue simply because the dues do not appear as paid at this time. We have already collected from over 2,600 members and there are still nearly 1,500 from whom we will probably hear. The Journal has cost us about $4,300 and our other expenses are in excess of $2,000. Advertising has yielded $2,214 with some accounts still uncollected. While our actual shortage will be little if any more than a year ago, the work has had to be curtailed in many directions to produce this result. The detailed report of the Council will supply you with the actual figures.

A. M. A.

It will be much easier for the State societies when the re-organization scheme is adopted in full and the American Medical Association is entirely re-organized upon the new plan. Little misunderstandings arise from the indefiniteness of the present relation.

Opportunity for Representation to A. M. A.

The question arises as to how many delegates we are entitled to to the A. M. A I certainly think that the members who have not paid but are still carried on the books of the local secretary and of our own secretary, should not be denied representation this year. The re-organization is as yet not fully understood and the intentions of the vast majority of these men is good. I trust you will give this matter an exceedingly liberal interpretation.

Surplus of Local Committee of Arrangements.

Some more specific rules should be adopted regarding any surplus funds which may be in the hands of the committee of arrangements. Several times in the history of the society friction has arisen over this matter. You should guard against this in the future.

Delegates to A. M. A.

You should devise some plan by which our quota of delegates to the American Medical Association will be kept full during the session, and by which some officer, preferably the chairman of our delegation, should be instructed to report back to the State Society. Last year there were several matters of importance arising in the House of Delegates of the A. M. A. in which our views were not properly voiced, because members of our delegation were not present. In the selection of delegates we should choose those who are willing to give up the necessary time to the work of the American Medical Association, and fore-go much of the literary and scientific program.

Dr. McCormack.

During the year, upon invitation of your President, Dr. J. N. McCormack, chief organizer for the American Medical Association, has visited Illinois and given us valuable instruction in matters pertaining to harmonizing and unifying the profession. Dr. McCormack visited the members of the District of Councilor J. L. Harvey in a district meeting at Jacksonville. He went to Mattoon with Councilor Newcomb, with the result that a good society has since been organized in Coles County. He met the physicians of Councilor Barlow's district at Olney, and those of Councilor Percy's district at Galesburg. It is eminently proper that you should in some way recognize these valuable services.

An Organizer.

This has been the first year in which the work of organization has been placed in the hands of your Councilors. Each councilor has certainly done his best to perfect re-organization in his district. Several of the districts now come to us with complete delegations, and in the whole State there are only nine of the counties without a component society entitled to representation in this House. However, many of these county organizations are as yet

little more than nominal in character and must receive your attention.

It is asking a good deal for each councilor to undertake the detail of perfecting an organization in each county, that is, of seeing that this organization is complete, and that the society is not simply a representation of some clique or small proportion of the practitioners of the county.

We should seek to represent every doctor who is of sufficient respectability to be entitled to any consideration whatever. We should remember that one of our privileges, as well as duties, is to educate and train the man who is not quite in harmony with his colleagues, or is possibly a little off color in his practice.

It has been suggested, and I think the plan admirable, that you provide for one or more body organizers in this State. It is estimated that two men, one in the city of Chicago, and one in the State at large, could personally interview every physician in this State during a year. These men would be under the direction of the Councilor of the district and the officers of the local society while at work, and would be able to present, at the end of the year, through the secretary's office, a detailed statement of the character and standing of every physician in Illinois, regardless of the school of graduation, or society membership. They would report to us those who do not belong to a medical society and the reasons given by each for remaining outside of our organization.

Hundreds of good men are still outside, because they have not had the influence and advantages of organization presented to them personally and in detail by some one thoroughly competent to make such presentation. It is entirely too much to expect your Councilors to undertake this detailed work. If we are ever to attain that high degree of organization, which we believe to be so much desired, some plan of personal solicitation must be adopted. This problem is most respectfully presented for your consideration.

This is doubly easy under our new plan of organization because there will be three societies instead of one to bear the financial burden—the local society, the State society and the A. M. A. all have equal interests. When our organizer gets a member of a local society he is a member of all three and the expense should be equitably distributed all along the line. Even if it should cost $2.00 for each member it would be a good investment as well as a good work for the cause.

President and President-elect.

It is pertinent to your consideration whether or not our Society has attained sufficient proportions to warrant a change in the method of electing your president. With a Society of several thousand members, distributed over a great State, divided in 102 counties, publishing a Journal and undertaking many lines of work which were formerly not thought of, it is a question whether or not your chief executive officer should not be relieved from the necessity of preparing a public address, to be delivered at the end of his incumbency.

It has been suggested that our principal address should be delivered by a president-elect, and the executive duties performed by a president who has had a year in which, not only to prepare his address, but also to prepare for his year of executive work. Several societies have adopted this plan, and it is believed to be conducive to better annual addresses, as well as to better and more comprehensive executive work.

After one has answered the demands of professional work and attended to the various executive and advisory duties required of your president, there is no time left in which to prepare an address of the quality to which so distinguished a body of listeners as gather at our annual meetings is justly entitled. Under present conditions either the address or the executive work is likely to suffer. Few men elected to this chair will have sufficient time for both. With rare exceptions your presidents have been men in active professional careers.

Special Committees.

Formerly it was the custom in this society to have annual reports on various designated subjects, and it has been suggested that from time to time we should appoint special committees to seek information and report back to this society. Some of the topics which have been named as desirable for the work of special committees are as follows:

State Institutions.

Our State institutions for the insane are preeminently medical institutions. Their superintendents are members of our profession, and should all be members of this society. I feel quite certain that all of them would be pleased to have this body appoint a committee, or if you please, several committees to visit during the year these institutions and report back the result of such visits and investigations. In this way the profession will receive valuable suggestions and superintendents of the State will receive the support of more intimate relations with the profession. Such a committee could bring more forcibly before us the need of an Epileptic Colony, apparently so much needed, and many other needs.

Medical Schools.

Our medical schools and the condition of medical education in this State is another subject which should have the oversight of a special committee, which would, during the year, visit each institution and give us the benefit of their observations.

State Medicine and Hygiene.

State Medicine and Hygiene is suggested as a suitable subject for special investigation, and one which is especially desirable at this time on account of various propositions arising in connection with tuberculosis, and could be of material assistance to the State Board of Health and to various local boards of health in bringing more closely to this organization the work which properly belongs to us. If fact, we should have

within this Society a sort of Public Health Association, which would be a reorganization of Section 3, upon much broader lines than formerly.

Medical Defense.

Few things are more interesting to the average practitioner, than medical defense. This has now been worked up to a practical utility, which is of financial value and moral support to every practitioner where it is applied. Your Council will make a special report, with recommendations, upon this subject, and it is to be hoped that this body will see its way to the establishment of a department of medical defense.

Legislative Committee.

The following letter from the Chairman of the Legislative Committee, and the Committee on Public Policy of this Society, will explain the condition of this Committee during the past year:

Chicago, April 18, 1904.

Dr. C. E. Black,
President Illinois State Medical Society,
Jacksonville, Ill.

Dear Doctor:

Yours of April 9th received, and in answer will say that at the meeting of the State Medical Society I was elected a member of the Legislative Committee without my **knowledge** or **consent,** having been informed of my election after the meeting.

During the year I have done nothing, neither have I been communicated with in regard to any Legislative matters, and I supposed it was an off year; that the active work would have to be done next year. Under these conditions I have no report to make. Will not be able to attend the next meeting as I have a case that I am **particularly** anxious about that is due at that time and I cannot be out of the city. I do not think I care to act in the same capacity another year for it would be hard work for any one to make a record after the excellent work you did last year. I have not the time to give to the work and do it as it should be done and I would not take hold of it without I could make a success.

Kindly ask one of the other members to act as Chairman at the next meeting, and greatly oblige,

Yours respectfully,
(Signed) P. M. Woodworth.

You should consider what instructions will be given to the Committee on Legislation, which will be elected at this meeting. Since your adjournment in Chicago, a year ago, the bill, which we all hoped would become a law, failed to pass the last Legislature owing to conditions which could not be overcome by the Legislative Committee at that time. It is now pertinent for this Society to decide whether the effort to secure a separate Board of Examiners will be continued at the next session of the Legislature; also whether or not it would be desirable to suggest a revision of the law organizing our State Board of Health.

The establishing of an epileptic colony by Illinois is one of the Legislative questions which should receive your attention, as is also the question of establishing sanitoria for consumptives. These are among the several legislative questions which are at present demanding consideration.

Committee on Public Policy.

Our experience this year would seem to demonstrate that it is bad policy to combine the Legislative Committee with the Committee on Public Policy. While these committees can assist each other there are some questions arising in Public Policy which are a distinct embarrassment to the Legislative Committee, and vice versa.

Council.

I wish to take this opportunity to say a word about the work of the Council during the past year. Certainly no executive officer could have had more hearty and earnest support than has been given by your present Council. Each man has worked early and late for the up-building of the interests of this society in his district. This has been done at a very considerable sacrifice of individual time and money. Each Councilor has tried to look after the interests of each county, although some of the districts are so large that it has been impossible for them to visit every county society or to organize every county. However, the work done has been large.

Besides it devolves upon the Council to handle all the funds of the Society and transact all of its business.

This Council has inaugurated a complete card index of the profession of the State, and a copy of this index is now in the hands of your Secretary, and a duplicate copy for each county will soon be in the hands of each county secretary. This index is complete as far as the data furnished by the Illinois State Board of Health can make it, and they have agreed to furnish us quarterly reports on cards which will always keep it up to date. It still lacks some of the data desired by the American Medical Association for its proposed directory, which can only be secured by a special solicitor, or by a great deal of work by county secretaries. This index will greatly facilitate the work of your organizer, if you should see fit to appoint such. The work of the Council will be presented in detail in the report of its chairman, and also in the reports of each individual Councilor.

The Journal.

The Journal has been published regularly, and an examination of its columns will show that substantial progress has been made.

You should declare by resolution that the published Journal is the book of minutes of this Society.

The question of advertising has been a source of some worry to your officers, but we hope that those accepted have not given offense to any member. If they have it would be pertinent for your body to formulate such rules for accepting advertising as you deem best. Early in the present year we engaged an advertising agent in Chicago, and opened an office there for the purpose of soliciting advertising. While

this agency has not yielded the returns which we hoped, we believe that progress has been made, and that much of the hard work of this year will bear fruit during the next. There is one way in which every member can be of great assistance in building up the Journal and that is by speaking to traveling salesmen about the Journal, as an advertising medium, and suggesting that they place their advertisement with us.

The Journal is a part of the property of every member of every county society and as such is of equal interest to all. We should all be careful to patronize, as far as practicable, those who advertise with us, and in that way give us the benefit of their patronage in return for ours. If each member will keep this matter in mind it will greatly facilitate the work of your Journal.

It costs over $1.00 per year per member to publish the Journal. This year the expense has been about $4,300. The report of the Council will give you the exact figures.

The County Society.

The officers of the State Society have had considerable work during the year in explaining the relation of the county society to the State Society, and also the relation of these two societies to the National Society. Much good work has been accomplished in securing new societies and in securing members for old societies. However, we are just now at the most difficult part of the problem. We have in almost every county in the State the nucleus of a society. It must be admitted that many of them are little more than a name, and none of them contain the proportion of the physicians of the county which they should.

There are some abuses which have crept in to some counties. In one society I discovered that five or six men were representing themselves to be the county society without giving any of the others an opportunity to join. We should use every means to be sure that the delegate sitting in this Society really represents the profession of his county and is not representative of any coterie or clique. In the county above referred to, the Councilor took the matter in hand and corrected it without difficulty.

District Society.

I wish to call your attention to the report which the Council wil make to you upon the subject of the district society. We have encountered much friction during the year from several district societies. This friction has arisen from two causes.

First, the status of the old district society was left undefined at our last meeting. This has made many of the members apprehensive that their district society was to be crowded out.

The second trouble was the unfortunate division of the territory of several of the old district societies. A number of these district societies antedate any others in the State in age, and have been doing most excellent work for over half a century. They have grown up in a sort of natural way, grouping together counties accessible to each other and having similar interests.

The Council will report to you a plan of redistricting the State, which is based upon the principle of preservation of the old district society as far as is compatible with the best interests of all concerned.

This plan retains in the main, the territory of every old district society. In one or two instances this territory is slightly curtailed, and in several other instances the territory is enlarged.

During the year I have visited every district society in the State, and have given them my personal pledge to do everything in my power to make these and honorable societies the Councilor District Societies. I believe that this will give us the best district societies, and at the same time will promote harmony and good feeling among our members.

It is entirely unnecessary that anything should be done to seriously disturb existing district societies. The organization of county units does not disturb them, but in fact strengthens them. I thoroughly believe in the county society as the unit of organization, but I also believe in the district society as a necessary local combination of these county units, and our constitution provides for just such societies.

The report which the Council will present to you will be based upon the plan of preserving the old district societies as far as practicable. Some of these district societies are older than the State Society, and the history of our State Society would be incomplete without their history and progressive influence.

The district society must have a definite relation to the county and State Society in order to perpetuate its usefulness. The reorganized society should be composed of county units, which meet monthly or quarterly, district units, which meet annually, special societies to meet special needs, a State Society and a National Society.

Other Changes in Constitution and By-Laws Suggested.

Considerable difficulty has arisen in applying the new Constitution and By-Laws from the wide separation of duties and subjects which belong together.

For example there are nine articles and chapters in which reference is made to the duties of the Secretary, and there are ten articles and chapters which treat of the duties of the Council. While it would be unwise to attempt a reframing of the sections, the following are a few minor changes which should be made in order to make the intent more clear:

First, Constitution, Art. VI, Sec. 3, may be read so as to convey the idea evidently intended, viz: that all acts, etc., should require approval by the Council, or in the language as there employed may be construed to make it mandatory on the Council to aprove "All acts" etc. To obviate such a rendering, it is suggested, after the word "Council," to insert the words **before the same shall become effective.**

Second, By-Laws, Chapt. IV, Sec. 2. The word "Including," which occurs in Section 1, has been omitted from the text before the word "Surgery," and should be restored.

Third, Chapt. VI, Sec. 2. The matter of the sessions of the House of Delegates and those of the Society is so mixed as to be made quite obscure. While a very careful reading of the text might give its meaning, yet if the word "its" be substituted for "the" before the words "first session," and the words "of the Society" be added after "General Session," the section would be thus rendered much more intelligible.

Fourth, Chapt. IX, Sec. 1. Contains an entire line, viz: "A Committee on Medical Registration," which has not now and never had by amendment or otherwise, a place in the text of the law of 1903. It is wholly foreign.

Fifth, Chapt. IX, Sec. 2. The word "the" before "Society" in the fourth line should either be omitted, or a like word placed before "Secretary" in the second line. This is of slight importance however.

Sixth, Chapt. X, Sec. 3. The original draft contains these words, "The Council or House of Delegates shall have authority" etc. The point is raised that two distinct bodies were given like authority to revoke and therefore might come in conflict. The law authorizes one body to issue a charter and another to revoke it. Should not the same body that issued it be the one to revoke it, and the body authorized to issue a charter is the Council. If the society having its charters revoked is aggrieved, it can appeal to the House of Delegates.

Seventh, Chapt. X, Sec. 8. "Name **shall** be transferred," should read **may** be transferred, otherwise component societies, including Chicago Medical Society, should be compelled to comply with the law. Which is intended?

These matters may seem of small importance to you, yet in practically applying our Constitution and By-Laws they assume a different aspect and for this reason are submitted for your consideration.

Our Records.

Only one set and it lacks 1855. This should be placed in some fireproof and accessible place. I should have suggested some Library in Chicago, but I understand there is a complete set there. Would it not be a good plan to deposit it in the State Historical Library at Springfield?

In conclusion, I wish to say that in the main the plan of reorganization is excellent, and will greatly promote the interests of the profession and the State. Another year the work will be better understood, and will go on much more smoothly. Your Councillors will have more time to devote to individual work with the members and the building up of the county units within their district.

It was moved and carried that said message be received and the suggestions contained therein be referred to a Committee of three which shall report tomorrow, at 3 P. M.

The chair appointed as such committee, Delegates, Will, Norbury and Preble.

The secretary presented a letter from W. W. Keen, of Philadelphia, asking that some action be taken for the collection of funds to be devoted to the purchase of a monument to the late Walter Reed, M. D.

It was moved by Norbury, and carried, that a committee be appointed to devise some plan by which "we can cooperate" in the erection of the monument proposed. Carried.

The Chair appointed as such committee Drs. Norbury, Webster, Percy, Walls and McAnaly.

The Secretary presented a lengthy communication from Dr. Allport, of Chicago, containing a WHEREAS and RESOLUTION adopted by the American Medical Association at its last meeting, and asked for some action upon it.

It was moved by Ryan, and seconded by Marcy, that this resolution be referred to a committee for action.

The Chair appointed as such committee Drs. Ryan, Adams and Pierce.

The Secretary read the bills of the Councilors of their traveling expenses in their work during the past year in organizing the various county component societies, and in attending the meetings of the Council.

It was moved by Webster, and seconded by Marcy, that said bills be paid and an order drawn on the Treasurer for the same. Carried.

Said bills are in figures, as follows:

C. Barlow	$ 85.74
W. K. Newcomb	61.40
Wm. O. Ensign	79.06
J. C. Sullivan	54.00
J. F. Percy	84.43
L. J. Harvey	128.76
O. B. Will	36.30
M. L. Harris	30.00
E. W. Weis	26.00

Here the Councilors read their individual reports of the condition of organization and of medical history of their respective districts.

It was moved and carried that said reports be accepted.

Chairman Ensign, of the Council, read a part only of the recommendations of the Council after which it was moved and carried that the questions of constitution and by-laws be taken up seriatim. Carried.

It was moved by Ryan, and seconded by Harvey, that the redistricting of the State, as suggested by the Council, as per map (printed on cover page) be adopted. Carried.

Page 29, Chapter 11, Section 4: it was moved that section 4 be added to said chapter. The local Committee of Arrangements, after paying all legitimate expenses of the meeting, shall turn all surplus, if any exists, into the Treasury, and the Illinois State Medical Society shall not assume any liabilities for any deficit. Carried.

It was moved by Ensign, and seconded, that the fiscal year be from May 1st, to the succeeding April 30th. Said motion was amended by Preble, and seconded, that it shall be from January 1st, to December 31st, next succeeding.

The amendment was amended that dues for current fiscal year are to pay until January 1st.

next. Said amendment to amendment was accepted by Preble. The amendment was then put and carried, and the original motion, as amended, was carried.

Notice was given by Ensign to amend constitution relative to election by House of Delegates of first and second vice presidents. Said notice must lie over for one day.

It was moved by Ensign, and seconded, that a committee of three be appointed by the Chair, of which Black shall be chairman, to publish an analytic index to the constitution and by-laws. Carried.

Notice was also given to change Article 6, Section 3, of the constitution, which said notice must lie over for one day.

Chapter 6, Section 2. It was moved by Ensign, seconded and carried, that the first "the" in fourth line, be changed to "its;" the word "session" in fourth line, be changed to "meeting," and the words "of the society" be added to said section.

It was moved by Ensign, and seconded, that in chapter 9, section 4, the ward "shall" in the eighth line, be changed to "may". Carried.

It was moved by Ensign, and seconded, that in Chapter 10, Section 3, the words "House of Delegates" in said section be changed to "Council." Carried.

It was moved by Ensign, and seconded, that in Chapter 8, Section 2, the words "House of Delegates" in the eleventh and twelfth lines be changed to "Council." Carried.

Notice was given by Delegate Ryan to add in Article 5, after the sentence "(a)" "shall be for two years."

The secretary read his report, and it was moved that the same be received and approved. Carried.

Report as follows:

To the House of Delegates of the Illinois State Medical Society.

Your Secretary begs leave to present the following:

Persuant to the orders of the Council I levied an assessment on the component societies, as per list of membership furnished me by the local secretaries. This roster at the time was very defective, in that some of the secretaries were imbued with the idea of making as good showing as possible, and therefore sent the names of members some of whom long before dropped out or had removed. Other secretaries failed to furnish such list and only presented those names when payment of the respective dues were made. This will account in a great measure for the excessive amount levied when compared with the actual amount paid. On the other hand you will notice in the following report that several counties have exceeded the amount levied, this being due to new members. In parenthesis I would like to say that the success of a medical society depends upon the activity of its secretary, and I am proud to acknowledge here the fact that we have in our component societies some of the most active and able workers, and I have no doubt but that in the near future, as soon as the new condition of affairs is thoroughly understood that the membership of the component societies will be rapidly increased.

Appended herewith is the financial statement of monies received by me from June 10, 1903, to May 1, 1904, also the statement of monies received from May 1, 1904 to May 15, as follows:

(Where no assessment was levied there was no return made of membership.)

County.	Assessed.	Paid me 1903-4.	Paid me 1904-5.	Paid Brown.
Adams	$ 118 50			100 50
Alexander				
Bond	28 50	15 00		6 00
Brown		21 00		
Bureau	69 00	51 00		13 50
Calhoun	7 50	1 50		7 50
Carroll	31 50	16 50		
Cass	30 00	3 00		
Champaign	70 50	48 00	7 50	
Crawford		28 50		4 50
Christian		30 00		3 00
Clark		18 00		1 50
Clay		7 50		
Clinton		15 00		
Coles				
Douglas	36 00	10 50		
De Witt	37 50	21 00		1 50
De Kalb				
Edgar				22 50
Edwards	15 00	7 50		
Effingham		37 50		3 00
Fayette	12 00			18 00
F. R. V. for Kane and McHenry				
Fulton	64 50	18 00		3 00
Gallatin	15 00	4 50	9 00	13 50
Green	31 50	10 50		
Grundy	22 50			24 00
Henry	21 00	1 50		21 00
Hancock		15 00		24 00
Henderson				
Jackson	30 00	22 50		3 00
Jasper			22 50	
Jersey	19 50	1 50		7 50
Jo Daviess	43 50			43 50
Johnson		22 50		
Kankakee	48 00	55 50		
Kendall	15 00	12 00		4 50
Knox	63 00	30 00		
Lake	25 50	37 50		1 50
La Salle	67 50	30 00	1 50	19 50
Lee				
Livingston	58 50	33 00		37 50
Decatur Med. Soc. for Macon	102 00	27 00		63 00
Macoupin	55 50	27 00	3 00	10 50
Marion	28 50			21 00
Marshall	27 50	6 00		
Mason			18 00	
Massac		16 50		
McDonough	30 00	18 00		3 00
McLean	133 50	72 00		31 50
Menard			25 50	
Mercer	37 50	4 50		
Morgan	72 00	30 00		19 50
Ogle	33 00			33 00
Peoria	103 50	61 50		
Pike	40 50	31 50		9 00
Pope	19 50			
Pulaski	25 50	16 50		
Putnam				
Richland	21 00	19 50		1 50
Rock Island	57 00	48 00		16 50
Sangamon	102 00	79 50	12 00	1 50
Schuyler	6 00			1 50
Scott				19 50
Shelby		10 50		
Stark	13 50	18 00		
St. Clair	99 00	30 00	45 00	58 50
Stephenson				
Tazewell	16 50	3 00		
Union	19 50			23 50
Vermillion	79 50			55 50
Wabash	33 00	7 50		1 50
Warren	36 00			30 00
Washington				
Wayne		19 50		

County.	Assessed.	Paid me 1903-4.	Paid me 1904-5.	Paid Brown.
White	27 00			
Whiteside	31 50			12 00
Will		36 00		
Williamson				
Winnebago	78 00	33 00	13 50	13 50
Chicago Med. Society	2,033 50	150 00		1,500 00
	$4,330 50	$1,388 50	$157 50	$2,278 50
		157 50		
		$1,549 00		

The following component societies have made advance payment for 1904-05 paid May 1st, 1904 to May 12, 1905:

Bond County	$ 19 50
Champaign County	7 50
Christian County	1 50
Coles County	18 00
Effingham County	1 50
Jasper County	1 50
Lake County	1 50
Mason County	3 00
Vermillion County	88 50
Whiteside County	13 50
	$156 00
Received from Committee on Arrangements, Chicago	$511 19
Received from Macoupin County	$14 90
Received from Henry County	1 50
Received from Hancock County	1 50
Received from Carroll County	13 50
Received from Gallatin County	3 00
Received from Wabash County	7 50
	$41 90

$41.90 was received in the month of June, 1903, and sent to Treasurer Brown (no Vouchers).

Recapitulation.

Dues received for the year 1903-04 and advance payment 1904-05 to May 1st	$1,549 00
Received dues advance payment May 1st to May 12th	156 00
Received from Committee on Arrangements Chicago	511 19
Received from Boldt (Randolph County)	3 00
	$2,219 19
Cash sent Brown to May 12th	$2,180 19
Previous transfers June 1903	41 90
	$2,222 09
	2,219 19
Amount uncredited on Register	2 90

Examined and found correct,

O. B. Will,
L. J. Harvey,
J. A. Sullivan,
Auditing Committee.

I further report that applications were made, approved by the Council and charters issued to the following component societies:

Edgar, Lee, Shelby, Christian, Cumberland, Crawford, Effingham, Logan, Mason Clinton, Clark, Jasper, Wayne, Putnam, Brown, Menard, Madison, Washington, Coles, Piatt, Saline, Iroquoise-Ford.

The charter of the Fox River Valley Medical Association for Kane county was returned. A new one was issued upon the approval of the Council to the Fox River Valley Medical Association for Kane and McHenry counties.

I beg further to report that I have just received a complete card index system, not only for the use of your secretary, but also for the local secretaries. The major part of the cost of which was borne by our President Black.

I beg further to report that I have supplied all component societies with the necessary blanks for making their annual reports. Many of the secretaries have made very full and complete reports of the legal practitioners in their counties. I believe this work will be very much facilitated by the use of the card index system.

The committee on scientific work responded to the call of the President, met in Chicago and formulated plans for the program. The sectional officers have found it impossible to strictly comply with the rules laid down by the committee as regards numbers.

Respectfully submitted,
E. W. Weis, Secretary.

It was moved by Ensign, seconded and carried, that this Society extend to the State Board of Health an invitation for the said Board to prepare such matter as may be of interest to the medical public from time to time, for publication in the Journal, as there may be space for it.

Delegate Stowell offered the following resolution, which, on motion, was carried.

RESOLVED: The Illinois State Medical Society, in annual session at Bloomington, hears with deep regret the serious illness of the son of our brother, Dr. Geo. N. Kreider, and wishes to express its earnest hope for his speedy recovery.

On motion, the House then adjourned until Wednesday, 2 P. M.

Wednesday, May 18th, 2 P. M., the House of Delegates was called to order by President Black

The Secretary called the roll to which 33 members answered present, a quorum.

The minutes of the previous meeting were read and approved.

W. O. Ensign read the Annual Report and Recommendations of the Council.

It was moved and seconded that said report be received and adopted. Carried. Said report is as follows:

Annual Report of the Council to the House of Delegates of the Illinois State Medical Society.

As this report very naturally stands as an introductory one to an entirely new association of duties, responsibilities and methods laid upon the Council, it may be very appropriately expected that it should largely partake of detail as to the fulfillment of such requirements in accordance with the law.

To take up these varied, multiple and often intricate duties, in many instances without any established precedent for guidance, and to discharge them with entire satisfaction, even to your Councilors themselves, has been a task of too great a magnitude to justify a reasonable hope of its accomplishment, within the brief period of a single year, with that completeness which could leave nothing further to be desired.

Nevertheless the Council has by no means been idle or negligent of its responsibilities, and it herewith offers a summary of its efforts to comply with the requirements and instruc-

tions of the law, and with some confidence that it can announce at least a fair amount of progress made during the year just closed, in this its first annual report under such altered provisions.

There have been five meetings of the Council held during the period named, not including that for organization near the close of the annual meeting of the State Society in 1903, or already held or to be held at the annual meeting now in session.

At the preliminary meeting, a chairman and a clerk were duly chosen and the relative terms of office of the Councilors were determined by lot, resulting as has been shown in the columns of each issue of the Journal of the Society during the past year.

The first general meeting of the Council was called at Chicago on May 20th, 1903, and subsequently such meetings were held quarterly on the first Thursdays in July, October, January and April following, either at Chicago or Bloomington.

The completion of the reports of the former Judicial Council and their deposit with the Secretary of the State Medical Society was accomplished, and the thanks of the Council on behalf of the Society extended to Dr. J. F. Percy, for his efficient services as clerk of such Council.

The change necessary to make the charter correspond with the new constitution was promptly acted upon. Dr. Geo. N. Kreider was continued as editor of the Journal and an assistant, as an advertising agent, was named. After some experience which was not as fruitful of good results as it was thought might have been secured, such latter arrangement was discontinued. A temporary committtee, later made permanent, on the management of the Journal was selected, consisting of Councilors Black, Harris and Will. The bond of the Treasurer was fixed at $2,000 for the current year and $50 given him for his services, and the salary of the Secretary for a like period, after continued consideration was made $350, $200 having been previously granted him for clerical assistance. Two thousand copies of the new constitution and by-laws were ordered, at a cost of $7.50 per thousand. The seal of 1902 was adopted as the official seal of the society under the new law.

As many of you are aware, at the last annual meeting, a special committee of the House of Delegates, with very brief opportunity for consideration, had quite successfully apportioned the State into nine councilor districts, practically numbered from north to south, and together embracing the entire one hundred and two counties of the State. For these separate districts and for the work performed and progress made therein, it is provided that the respective Councilors shall each report to you for his own territory.

For the assistance and guidance of the Councilors in their work, Doctors McCormack and Simmons, of the Committee on Medical Organization of the American Medical Association, were present by invitation, at the quarterly meeting in July, 1903, and very freely and instructively discussed the plan of that Association for such organization throughout the various States of the Union, for the benefit of similar efforts in this State; and were voted the hearty thanks of the Council for their presence and the valuable suggestions and advice afforded.

Thus far the Council has not found it necessary to avail itself of the authority given it to formulate any rules governing either expenditures or its own actions. Further experience, however, may serve to show their future desirability.

No questions of discipline of members or appeals, save one or two of the latter, too late for consideration, before the annual meeting, have arisen during the year to add to its labors or to mar the existing harmony within the State organization or its component societies.

A few requests for the interpretation of portions of the law of 1903, or advice as to methods of procedure under its provisions, have been met and the decisions or advice of the Council, or its members, acquiesced in with little or no reluctance.

The matter of a card index system of registering membership has been carefully considered and an effort steadily made toward its complete introduction.

While no serious questions of the rights and standing of members have been presented, it has doubtless been the experience of nearly every District Councilor that, especially in the organization of new societies, or in the resurrection of long time dormant old ones, one or two conditions have been found to exist, which are worthy of your consideration.

First: In a formerly unorganized county, a physician interested in medical society work, in the absence of such privileges nearer his home, has, for a considerable period, allied himself with the organization of another county, where he has become a valued member and acquired an acquaintance and interest with which he is loath to part, and from which organization a separation is equally objectionable to, if not actually resented, by his associates.

Second: In a few instances at least and, doubtless in the absence of a full conception of the advantages of that complete membership which at the same time allies him with the higher organization, an individual has sought association with the local society only. While the law as it now stands is radical and inflexible, it would appear that for a brief period at least some latitude should be given in each case, with no little confidence that the former condition would in most instances properly adjust itself in due season, and that the latter, having afforded an opportunity for acquiring an interest in the work and a better knowledge of the advantages of a complete membership, the applicant would instinctively fall into line with his fellows and thus his full membership be eventually secured.

The Committee of Arrangements of the last annual meeting, on presenting a report showing

a surplus above expenses, called in question the right of the State Society to claim such funds, and requested the opinon of the Council as to their proper disposal.

It would appear that the law of 1902, which very plainly and fully designates the duties of the Committee of Arrangements, and thus concludes the subject: "After paying the legitimate expenses of the session, it shall cover any surplus into the general treasury." has been substituted in that of 1903 by a section that is comparatively indefinite and entirely omits any reference to the subject of a surplus.

Confident that the law under which such committee had been discharging its duties still applied to it and, being aware that it had been the almost unalterable custom of the Society for many years at least, to receive such surplus, it was held: "That the Committee of Arrangements acted under the law of 1902;" and that it is the sense of the Council "that the State Medical Society, being also guided by precedent, expects to receive any surplus that may exist; and further that the Society does not assume any liability for a deficit."

While such a decision was then founded on both the law and precedent in the case, at this time it could rest only on precedent, or perhaps as we may say in the absence of law, on custom. Hence, it would seem desirable that, at this session, there should be created some specific provision clearly defining the matter in accordance with the wishes of the Society.

A very ample and complete record for the use of the Secretary in registering membership and keeping accounts with component societies has been secured, and authority has been given that officer to purchase blanks and stationery to the value of $20 for the reports of local medical societies; and, in order to encourage the work of organization, some liberty was given, to a temporary extent, in issuing the Journal to prospective members, that they might thereby become better acquainted with its character and value.

In entering upon the discharge of its duties, the Council found 34 counties, or one-third of the entire number, yet unorganized or chartered as component branches of the State Society. Of those thus unaffiliated, the following 23 have since received charters in due form:

Brown, Christian, Clark, Clinton, Coles, Crawford, Cumberland, Edgar, Effingham, Jasper, Lee, Logan, Madison, Mason, Menard, Piatt, Putnam, Saline, Shelby, Washington, Wayne, Iroquois—Ford.

Owing to the intimate geographical relation of a twenty-fourth county, Dupage, to Cook, on request, it was permitted to affiliate as a branch of the Chicago Medical Society for the latter county.

The counties of Kane and McHenry, of their own choice, were reorganized together as a component society for such counties, and granted a new charter in exchange for that issued previously; while Iroquois and Ford have united into a bi-county organization. Thus a total of 24 counties have been organized, during the year just passed, into 21 separate and one bi-county societies and one has united with an already existing society; constituting a sum total of 92 in the State now in affiliation; while there yet remain ten counties, viz:

Boone, Franklin, Hamilton, Hardin, Jefferson, Lawrence, Monroe, Moultrie, Randolph and Woodford not thus allied with the State Society.

The question of organization or readjustment of district societies has been very properly postponed during the past year for the important reason that it was believed that, the briefly considered arrangement of dividing the State into Councilor Districts a year since, after more experience, might prove to require some changes to further the interests and efforts of medical organization throughout the State; and that, should that work have been accomplished before such changes had been made and the respective district boundaries more permanently established, more or less revision would have been sooner or later required, thus producing grounds for some complaint if not much undesirable friction.

Again, as the District Society is, in a great measure, intended to be based upon the component societies in its territory, it would seem to be further essential that the latter should be first provided for and their organization completed, on which to build the former. The Council therefore presents to you at this time some suggested changes in the composition of the various districts, which it believes would further such organization, and recommends their adoption. (See diagram accompanying this report.) This plan not only proposes to change existing district lines and numbers to some extent but provides two additional councilors for the district which embraces the city of Chicago, a change that would also necessitate a corresponding modification of the constitution.

As the law specifies no date limits to such end, it would appear desirable that the bonds of the proper fiscal year should be clearly determined, and its close fixed some days in advance of the annual meeting, since to await the opening of such meeting must in a great measure render concluding financial reports somewhat hastily prepared and liable to be incomplete or otherwise imperfect.

The annual report of the Committee on Legislation of 1903, left in the hands of the Council at the close of the meeting last year, after some modification, was ordered published in accordance with the instructions given by the House of Delegates.

The subject of medical defense has received considerable attention and the following recommendations are herewith presented, after due approval by the Council of the report of a special committee for its consideration: "That the State Society take up the question of medical defense; that a committee of five members be appointed by the House of Delegates to be known as the Medico-Legal Committee; that two members of this committee be appointed from Chicago and three from the State at large; that the members of said society be assessed

$1 each; and, that the amount so collected shall be set aside by the council and shall be known as the medical defense fund and be under the charge and control of the Medico-Legal Committee."

A matter of interest, yet not sufficiently well known among component societies, is the fact that the editor of the Journal has been instructed to supply secretaries of such societies stationery with appropriate heading at cost price.

The elimination of any provision for the annual election of vice-presidents from the constitution of 1902, and the substitution of the chairmen of the various district societies instead, was followed by a like provision continued in the law of 1903, however, without the clause determining by lot the order of precedent of such officers; but, owing to the fact that existing district societies, although duly chartered by the State Society under the law of 1902, have not yet been readjusted as Councilor District Societies as named in the new law for reasons already presented, has given rise to diverse opinions as to the lawful existence of any vice-presidents at this time. Without stopping here to discuss such legal question, it might be well to inquire if the present law should not be so modified as to more nearly and closely express the will or sentiment of the Society in relation to the matter of vice-presidents.

Constant efforts on the part of the Council have been made, throughout the year just passed, to remove and avoid any and all sources of justification for friction or sensitiveness between the State Board of Health and the Council, and the following report in substance, of a special committee of the latter, was duly adopted:

"Believing that a cordial relationship between the Illinois State Medical Society and the State Board of Health could and should be made mutually helpful to all parties immediately concerned, as well as to the entire profession and the people of the State; and that through the columns of the Society's Journal, each and all might be made familiar with the important transactions and future plans of such Board; to that end the committee would venture to suggest that if concise summaries of its proceedings were to be from time to time prepared, especially of such matters as at least might appear to be of the most interest and value to the medical profession and the public, and supplied to the editorial office of the Journal for publication, it was confident that such would find a place in its columns in so far as space could be spared, in full or in part, for their admission.

It is believed that the present law of the society can be greatly enhanced, in both convenience and value to its members, by a thoroughly prepared analytical index or digest of the constitution and by-laws, issued in connection therewith, and it is therefore recommended that a special committee of three members of the Society be appointed, by the House of Delegates, to prepare such an index to be published as an appendix to future editions of the constitution and by-laws. Inasmuch as the present president has already prepared, with much pains and effort, such a digest for the use of himself as presiding officer and the Society, at its present session, it is further recommended that Dr. Black be named as chairman of such special committee.

The Committee on Public Policy, having met at Bloomington, Ill., on the 16th day of May, 1904, pursuant to a call previously issued; after the consideration of several suggestions as to desirable changes in the law, voted that, inasmuch as the Council was prepared to present to the House of Delegates the various points approved at such meeting, the committee would make no other report at this time.

The following proposed changes in the present law, also approved and recommended by the Council, are accordingly herewith presented:

1st. Art. VI, Sec. 3, Constitution (page 6, edition 1903) to add to such section the words **before the same shall become effective.**

2nd. Chap. VI, Sec. 2 By-Laws (page 16, edition 1903) to substitute for the first "the" in the fourth line of the section, the word **its,** and to add to the last line of the same section, the words **of the Society.**

3rd. Chap. IX, Sec. 4, By-Laws (page 23, edition 1903) to substitute the word **may** for the word "shall" in the eighth line of such section.

4th. Chap. X, Sec. 3, By-Laws (page 25, edition 1903) to substitute the word **Council** for the words "House of Delegates" in the fifth line of the section.

The first two alterations proposed are believed to be in the interest of a clearer interpretation of the law; the third is introduced in order to exchange a mandatory provision for one leaving the necessity for calling a preliminary meeting to the discretion of the Committee on Public Policy, since the House of Delegates, as now constituted, is authorized to meet in advance of the general meeting, (see Chapter V, Section 1, By-Laws, page 13), and is therefore competent to consider most of the questions for which such preliminary meeting was formerly assembled; and the fourth is intended to correct an oversight made in adopting the Constitution and By-Laws of 1903, by which correction the power that grants a charter is more properly given the authority to revoke the same.

The Journal.

It is needless to expect that, in the conduct of a journal of any kind or character, there will be no criticisms or complaints as to real or fancied imperfections or irregularities. How much more, therefore, are the same conditions likely to occur in relation to a publication conducted in the interests of a particular profession. However many and undersirable, especially if without just cause, such may appear to be, yet they may be said to be in no slight degree something of an index of the general interest taken in the columns of a publication.

In most instances during the year such criticisms, on examination, have been shown to be wholly or largely unfounded, the matter has

been satisfactorily explained, or the declared grounds of complaint have been unexpectedly claimed to exist, when a sincere effort had been really made to accomplish just what it was assumed or implied had not been undertaken.

At the beginning of the year the Journal entered upon a new era in its existence by becoming the official publication of the Chicago Medical Society. This arrangement placed new and greater responsibilities upon it and materially increased the labor of the editor and printer. These transactions have since formed an important part of the contents of that publication. Many members have expressed their high appreciation of the value of the local society proceedings published, a feature that becomes of more and more interest and importance with each succeeding year. The details relative to its publication in the past and the prospective improvements desirable in the future need not be here enumerated, but that its steady growth in value and influence is in evidence can not be successfully denied, while the growing amount of advertising received, notwithstanding an increase of rates has been made therefor, points clearly to its extended importance and value as an advertising medium, and to its certain success in such direction.

There have been about 4,500 copies issued monthly during the year, at a cost of about $1 per copy.

The expenses have been as follows:

Printing		$3,193 26
Postage		227 31
Advertising commissions		133 88
Stenographer		225 91
Editor's salary		600 00
Editorial office expenses		80 00
Total		$4,460 36

The Committee on Publication of the Journal reports to the Council a more minute estimate of its actual cost, which it states has been $4,245.49, and that the receipts from advertising have reached $2,214.22, leaving $2,031.27 as the amount necessary to have been otherwise provided for, or $468.73 less than the amount, viz: $2,500, set as the limit for such purpose, by the House of Delegates, a year since.

The year to come promises much for this Society's publication, and will demand enlarged facilities and extended pages, therefore it must inevitably call for an increased outlay, but such greater expense will no doubt be fully or largely compensated for by a correspondingly enlarged income from its advertising department.

Its growth in the past has been steady and substantial, and the prospects for its future development are unlimited and most promising. Its field of usefulness is an unbounding one and already heartily recognized by the members of the medical profession of our State, to whom it is a source of great interest and helpfulness. May its value and influence continue to increase with its years.

Finances.

The haste with which the present Constitution and By-Laws were adopted a year since, afforded little time or opportunity to many members for a thorough consideration of the possible changes thereby likely to result, especially as to financial conditions and, although a special committee of the House of Delegates was assigned the duty of making recommendations in relation to such questions, it was scarcely to be expected that its members could have had sufficient time during a single brief sitting of but a few moments only, as then granted it, to have forseen or made provision for all the possible contingencies liable to later occur.

The establishment of the annual dues at $1.50 for the ensuing year, as the source of a large part of the Society's revenue, on the one hand, and on the other, the beginning of the new year with a deficit, the shrinkage of local society membership whenever each component organization should be called upon for its per capita of such dues, the increased expenses of the eleven Councilors, and especially so of the nine assigned to districts with their enlarged duties in the discharge of the full requirements of the new law, as well as the introduction of a card index system of registration, all to very greatly enhance the amount of expenses, have appeared to leave little grounds for a just expectation otherwise than that the close of the current year would find the Society not without considerable indebtedness, which expectation has not proven to have been unfounded.

In accordance with the duties of the Council, the accounts of the Secretary and Treasurer have been duly audited by a special committee and found to be correct.

There is shown to have been received by the Secretary and properly paid over to the Treasurer, $2,769.59, while $4,635.47 has been received by the latter from other sources, making the total sum of receipts $7,405.06. There have been approved by the Council and paid out by the Treasurer bills to the amount of $8,208.94, leaving a balance of $803.88 unpaid at the close of the year, shown as follows:

Total amount of disbursements		$8,208 94
Treasurer received from dues	$890 68	
Checks returned	8 00	
Chicago Medical Society	1,500 00	
Subscriptions	21 00	
Secretary	2,222 09	
Advertising	2,215 79	
Secretary	547 50	
Total receipts		$7,405 06
Total amount of deficit		$ 803 88
Amount deficit of 1903		144 32
Amount deficit of 1904		$ 659 56

Property.

The following invoice of property on hand has been prepared of items collected from all known sources of its existence and for the first time in the history of the Society such is herewith submitted:

In the hands of the Secretary—

1 seal—cut, cost about	$ 2 00
1 card cabinet, cost about	19 00
1 register, cost about	10 75

1 register book, cost about.....	2 50
2000 Constitutions and By-Laws	15 00
1 set (incomplete) bound volumes transactions, value.....	———
200 copies duplicate, transactions, value.....	———
	———
Total in hands of Secretary.....	$49 25
In the hands of the Treasurer—	
Stamps, cost.....	$ 2 60
Stationery, cost.....	3 00
Card Ledger, cost.....	2 00
Old registers, value.....	———
	———
Total in hands of Treasurer.....	$ 7 60
In the hands of the Editor—	
2 seal—cuts, cost about.....	$ 7 00
1 map cut, cost about.....	10 00
30 (more or less) cuts, half tones, etc., value.....	———
300 (more or less) copies Journal issues, value.....	———
	———
Total in hands of Editor.....	$17 00
In the hands of the former Secretary—	
1 set Society's transactions (less 1855) value.....	———
	———
Total property found, cost or value....	$73 85

Some years since the Society constituted Dr. D. W. Graham a special committee to secure, if possible, a complete set of its own transactions. Such set is now complete save the issue for the year 1855, which he has thus far been unable to obtain. But two copies of such number are at present known to be in existence, viz: one in the Newberry Library of Chicago and one in other hands, neither of which can be secured at the present time.

In Conclusion.

The duties of a Councilor under the present law constitute so many and so varied responsibilities, as to render the office a burden and one not to be desired by an active and busy member of the profession.

After an experience under both methods made use of by this Society, it would appear no difficult matter to be convinced that a purely judicial body composed of members of extended experience in the Society, holding no other office in the organization, or no position under political appointment, should alone constitute the Council, and that the Councilor's duties should not include the work of local medical organization, which might be more appropriately placed in the hands of an especially constituted committee, or body, or even an individual organizer, charged with the duty of looking after the Societies and their interests as to memberships, professional organization and effort throughout the State.

The State Society is now of so large proportions, as to membership and work undertaken, that it would appear to be but the part of wisdom to distribute the official duties to be performed rather than to concentrate them in the hands of a few, which imposes upon an individual member an amount of labor that might more properly and satisfactorily be borne by a number. The duties of the Councilor, as now arranged, partake of both judicial and executive character, an association of functions that, under most circumstances and conditions, is far better avoided. The suggestion of the President as to a State organizer, whose services might relieve the Council of its duties along such line, is worthy of your careful consideration in this connection.

Whenever the time shall have arrived that all the local medical organizations of Illinois shall have been completed, as contemplated under the standard plan of the American Medical Association, which plan has been practically adopted by this State, but a small part of the work to be done will have been accomplished.

A double task will yet remain to be performed in keeping such component societies infused with a vigorous vitality, and active sources of interest and inspiration to the profession in their localities, and thus in helpful touch with the State organization.

That such can be done is possible, that such should be done is without question, that it will be done is yet a problem to be solved. The field is a broad one, and the desired results can only be secured by united, earnest and persistent effort.

Wm. O. Ensign,
Chairman Council.

It was moved by G. W. Webster that a vote of thanks be tendered the Council for its very efficient services rendered the past year. Carried.

H. C. Fairbrother presented his bill of $47.00 for actual traveling expenses as Councilor. It was moved by M. L. Marcy and seconded by J. H. Stowell that same be paid. Carried.

Moved by Ensign and seconded that Section 2 of Article IX be amended by adding after the word "President" the words "Vice-Presidents;" also to eliminate the sentence on page 8 same section, "The Presidents of the Councilor District Societies shall be the Vice-Presidents." Also to change any other article or chapter as may be necessary to correspond therewith. Carried.

Moved by Ensign and seconded that Section 3 of Article VI be amended by adding the following words: "before the same shall become effective." Carried.

L. R. Ryan submitted amendment to Article V after sentence (a) "shall be for two years."

On motion the same was declared lost.

Moved by Ensign and seconded that in Section 2, Chapter VIII, page 20, the words "at the annual session" in 7th and 8th lines be stricken out; that the next following word "of" be changed to "to" and the words "House of Delegates," 8th line be changed to "Council;" that the words "House of Delegates," 11th and 12th lines be changed to "Council." Carried.

Chairman Ryan of special committee submitted the following resolution, which upon motion was declared adopted.

Whereas, The value of perfect sight and hearing is not fully appreciated by educators

and neglect of the delicate organs of vision and hearing often leads to disease of these structures, therefore be it

Resolved, That it is the sense of the Illinois State Medical Society that measures be taken by boards of health and boards of education and school authorities, and when possible legislation be secured looking to the examination of the eyes and ears of all school children, that disease in its incipiency may be discovered and corrected.

L. R. Ryan,
A. L. Adams,
Norval H. Pierce,
Committee.

Chairman O. B. Will of special committee to present recommendations as were contained in President Black's message to the House.

Moved by Campbell and seconded that it be received and adopted as a whole. Carried.

Said report is as follows:

To the House of Delegates, Illinois State Medical Society:

Your committee, to whom were referred the recommendations and suggestions contained in the President's address to your body, beg to report as follows:

As to the basis for appointment of delegates to the A. M. A. we advise the adoption of a resolution making the proportion of such delegates to harmonize with the demands of our society's numerical membership at present in good standing.

The suggestion with respect to surplus funds in the hands of local committees of arrangement having been subsequently reported by the Judical Council, and acted upon by your body, needs no further consideration.

With reference to the matter of keeping your delegation to the National body full as to number, and providing for report from it to the State Society, we recommend the adoption of a rule requiring the appointing power to choose only those members who will distinctly obligate themselves to go and remain in attendance during the whole of the sessions of the National House, and report through their self-selected chairman the points of essential interest to this body.

In obedience to the suggestion respecting the services of the distinguished gentleman concerned we propose for your adoption, the following:

Whereas, The chief organizer for the A. M. A., Dr. J. N. McCornack, of Kentucky, has generously given of his time and energy in aiding the local Councilors of this State in their work, therefore be it

Resolved, That the Illinois State Medical Society hereby tenders its thanks to Dr. McCormack for his valuable influence and aid in furthering the cause of organization in this State, and assure him of the hearty esteem with which his services, suggestions and admonitions have been received.

With respect to the suggested advisability of having or employing a State organizer separate and apart from the District Councilors, we suggest that such advisability and practicability be left to the discretion and determination of the Councilor Board, with power to act.

With reference to the President's intimation relative to the duplication, or sliding-scale, so to speak, method of Presidential succession, we recommend that the question be placed in the hands of a suitable committee for consideration and report at the next annual meeting, particularly since it involves a constitutional change of possibly greater significance than is at once apparent.

As to special committees and their advisability particularly on "State Institutions," "Medical Schools," "State Medicine and Hygiene," and "Medical Defense," as suggested, we are of the opinion that the subject should be referred for further consideration before action is taken, in order that the relation of the work of such committees to the sections may be fully determined, in the event that such authorization is deemed advisable.

As to the constitution, and special prescription as to duties of the Legislative Committee, as hinted at in the President's address, we can only say that we are not sufficiently advised to assume to make any explicit recommendations.

With respect to the question of the character of advertisements to be admitted to the columns of the Society's Journal, we recommend that the determination of the advisability or non-advisability of such insertions be left to the direct management of the Journal, with advice and consent of the Councilor Board, in accordance with the spirit of the principles of ethics as formulated by the National Body.

In conclusion; the changes recommended to clear up ambiguities in the constitution and by-laws having already been acted upon in connection with the report of the Councilor's Chairman, there seems no need for further consideration.

Respectfully submitted,
O. B. Will,
F. P. Norbury,
R. B. Preble.

It was moved and carried that the chair appoint a committee of three to confer with a similar one of the State Dental Society in any matter of mutual interest.

The chair read a communication from Henry E. Tuley, relative to the Mississippi Valley Medical Association.

Moved that the chair appoint two delegates to that Association. Carried.

The following resolutions were offered by Campbell:

Resolved, That a special committee of three on tuberculosis be created with J. W. Pettit, of Ottawa, as chairman, with power to appoint his associates. Which upon motion was carried.

The following resolution was presented and upon motion was carried:

Whereas, The term of office of C. B. Johnson, of Champaign, as member of the State Board of Health expires in December of the present year; be it

Resolved, That we endorse his action as member of the Board and recommend his re-appointment.

Adjourned to meet tomorrow morning at 8:30 o'clock.

Meeting of the House of Delegates, May 19, 8:30 A. M., with President Black in the Chair.

The roll call showed a quorum present.

The Chair announced the members of the special committee to confer with the State Dental Association as follows: R. B. Preble, Chicago; A. L. Adams, Jacksonville; E. Mammen, Bloomington.

The Chair also announced the folowing delegates with power to select their own alternates to the Mississippi Valley Medical Association: J. R. Penington, Chicago; O. B. Will, Peoria.

The first order of business is the election of officers.

The first office to be filled being that of President, nominations are in order. William E. Quine was placed in nomination by J. W. Pettit, and E. Mammen by J. Whitefield Smith. Both were seconded.

It was moved and carried that the nominations be closed.

The Chair declared as tellers of the election J. H. Stowell and B. B. Griffith.

The tellers announced that Quine received thirty-one votes and Mammen six, whereupon the Chair declared William E. Quine President Elect of the Illinois State Medical Society.

First Vice-President, H. C. Mitchell was placed in nomination by J. T. MacAnally.

It was moved and carried that nominations be closed.

It was moved and caried that the Secretary cast the ballot for the House of Delegates.

For First Vice-President the Secretary announced the ballot cast for H. C. Mitchell, whereupon the Chair declared H. C. Mitchell elected First Vice-President.

For Second Vice-President the name of J. F. Percy was placed in nomination by Delegate Dodson.

It was moved and carried that the nominations be closed, and that the Secretary cast the ballot for Second Vice-President.

The Secretary reported the ballot cast for J. F. Percy. The Chair declared him elected Second Vice-President.

The next office to be filled was that of Secretary. J. H. Stowell placed the name of Edmund W. Weis in nomination.

It was moved and carried that nominations be closed.

It was moved and carried that the President cast the ballot for the House of Delegates for Secretary.

The President announced the ballot cast for Edmund W. Weis and declared him elected.

For Treasurer the name of E. J. Brown was placed in nomination by W. O. Ensign.

It was moved and carried that the Secretary cast the ballot for Treasurer. The Secretary reported the ballot cast for E. J. Brown and the Chair declared him Treasurer.

Owing to the redistricting of the State into Councilor Districts great confusion was created as to which of the Councilors should hold their office. Whereupon the Chair ordered that there be an election of Councilors in every Councilor District except No. 3.

Nominations being in order, J. H. Stealy, of Freeport, was placed in nomination for district No. 1 by W. O. Ensign. There being no further nominations the Secretary was instructed to cast the ballot. J. H. Stealy was declared Councilor-elect of District No. 1.

W. O. Ensign, of Rutland, was placed in nomination for Councilor of District No. 2, and there being no further nominations the Secretar was instructed to cast the ballot, and the Chair declared him elected.

J. F. Percy, of Galesburg, and O. B. Will, of Peoria, were placed in nomination for Councilor of District No. 4.

The tellers announced the result of the ballot of which Will received twenty-six and Percy ten votes.

The Chair declared O. B. Will Councilor of District No. 4.

J. Whitefield Smith, of Bloomington, was placed in nomination for Councilor of District No. 5. There being no further nominations it was moved and carried that the Secretary cast the ballot. So cast.

The Chair declared J. Whitefield Smith Councilor of District No. 5.

The name of Carl E. Black was placed in nomination for Councilor of District No. 6.

It was moved and carried that the Secretary cast the ballot. So cast. M. L. Harris declared Carl E. Black Councilor of District No. 6.

E. E. Fyke, of Centralia, was placed in nomination for Councilor of District No. 7.

It was moved and caried that the Secretary cast the ballot for E. E. Fyke. So cast.

The Chair declared him Councilor of District No. 7.

The name of W. K. Newcomb was placed in nomination for Councilor of District No. 8.

It was moved and carried that the Secretary cast the ballot. So cast, and the Chair declared W. K. Newcomb Councilor of District No. 8.

J. T. McAnally, Carbondale, was placed in nomination for Councilor of District No. 9.

It was moved and carried that the Secertary cast the ballot. So cast, and the Chair declared him elected.

The next order of business was the appointment of a Committee on Medical Legislation.

Frank Billings, Chicago, was placed in nomination for the chairman of the Committee on Medical Legislation. It was moved and carried that the nominations be closed, and that the Secretary cast the ballot.

Frank Billings was declared elected chairman of the Committee on Medical Legislation.

J. W. Pettit and Carl E. Black were placed in nomination as members of the Committee on Medical Legislation. It was moved and carried that the nominations be closed and that the Secretary cast the ballot. They were declared elected.

The name of J. W. Pettit was placed in nomination as chairman of the Committee on Public Policy.

It was moved and carried that the Secretary cast the ballot, and the Chair declared J. W. Pettit chairman-elect of the Committee on Public Policy.

It was moved and carried that the chairman J. W. Pettit, have power to select the other members of his committee. (J. W. Pettit has selected as associate members on the Committee on Public Policy, Charles L. Mix, Chicago, and J. F. Percy, Galesburg.)

The next order of business was the election of delegates to the American Medical Association of which three were to be elected.

The following names were placed in nomination: J. W. Pettit, G. W. Webster, H. N. Moyer, Carl E. Black, and D. W. Graham.

It was moved and carried that on the first ballott the three having the highest number of votes be declared elected. The tellers announced the result of the vote as follows:

Carl E. Black, twenty-one; G. W. Webster, eighteen; Frank P. Norbury, seventeen; J. W. Pettit, sixteen; D. W. Graham, fourteen; and H. N. Moyer, ten.

The folowing the Chair declared elected as delegates to the A. M. A.: Carl E. Black, G. W. Webster, F. P. Norbury.

The following were placed in nomination for the office of alternates to the delegates to the A. M. A.: J. W. Pettit, D. W. Graham, H. M. Moyer, M. L. Marcy, C. S. Plummer, D. L. Jewett, F. C. Vandervort, and W. S. Holliday.

It was moved and carried that the nominations be closed. It was moved and carried that the Secretary cast the ballot for alternates, and the members mentioned were declared elected alternates to the A. M. A.

It was moved and carried that the Secretary arrange the list of alternates in the order named.

The next order of business being the place of meeting of the Society for the next year.

L. Ryan invited the Society to meet in Galesburg. B. B. Griffith invited the Society to meet at Springfield and J. F. Myers extended a very hearty invitation to meet in Rock Island. Nominations were declared closed, and the tellers announced the result of the vote as follows:

Rock Island, twenty-one votes; Springfield, two, and Galesburg, four.

The Chair here announced the other two members of the committee on Analytical Index of our Constitution and By-Laws, W. E. Quine and E. W. Weis.

Special Committee on Reed monument, by its chairman, F. P. Norbury reports as follows:

To the House of Delegates, Illinois State Medical Society.

Your Committee, in recognition of the great scientific worth and the value to humanity of the work of the late Major Walter Reed, of the Medical Department, U. S. Army, and believing that the spirit of service, which prompted him so valiantly to pursue the subjugation of disease in Cuba, under such heroic self-sacrificing conditions and adverse conditions of his own health, should be commemorated by the profession of this country as a perpetual reminder to the great public in general, and our profession in particular, that in the conquests of disease by the Army Surgeon, the noble virtues of duty and of service truly rendered to country, home and to the individual, is a service, as worthy of commendation, as that rendered by any other department of the military service.

To further disseminate knowledge regarding the great work done by Major Reed and to interest the profession of Illinois in the monument proposed to commemorate this service, your Committee would respectfully suggest the appointment of a Committee by the President to be known as the Walter Reed Monument Committee, granting them power to interest the profession of this State, through the Secretaries of County Societies soliciting funds for this purpose.

That this Committee should have the privilege of electing its own Treasurer, who will receipt direct to Secretaries of local Societies and who will transmit to Dr. W. W. Keene, of Philadelphia, Chairman of the National Walter Reed Monument Committee, the funds collected, taking his receipt.

Frank P. Norbury,
Geo. W. Webster,
J. F. Percy,
J. T. McAnally,
F. X. Walls,
Committee.

It was moved that same be adopted. Carried.

The Chair appointed the following committee to take charge: F. P. Norbury, G. W. Webster, F. X. Walls, J. F. Percy and J. T. McAnally.

It was moved by Harris and seconded that a committee of five on Medical Defense proceed to get an expression from the component societies, and as soon as a majority agree to the proposition to go on with the work. The same was amended that January 1st next be the date when the work should begin. Said amendment was declared lost.

The original motion was carried.

It was moved by Newcomb that the Committee on Medical Defense be the nine Councilors. This motion was offered as a substitute for the one just carried. Lost.

It was moved by Weis and seconded by Marcy that the annual per capita tax be $1.50. Carried.

The Chair announced the following as a Committee on Medical Defense: W. A. Brown, H. N. Moyer, G. N. Kreider, E. J. Brown and H. C. Mitchell.

There being no further business it was moved and carried to adjourn sine die.

E. W. Weis,
Secretary.

ILLINOIS STATE MEDICAL SOCIETY.

Minutes of Section one.
First Day—Morning Session.

The section was called to order in the Unitarian Church by the Chairman, Dr. J. W. Pettit, at 9:15 A. M. The Chairman called attention to the rule regarding the time limit allowed for the reading of papers and each discussion; the former to consume not more than twenty minutes, and the latter not more than five minutes for each discussion, unless the section decide otherwise.

The first paper was read by Dr. E. R. Larned, of Chicago on **Vaccination; How to do it; What to do; What to Expect.**

The discussion was opened by Dr. Wm. E. Quine, of Chicago, and closed by the essayist.

Dr. James E. Coleman, of Canton, followed with a paper on **The Relation of Medicine to Surgery.**

The paper was discussed by Dr. H. N. Moyer, of Chicago.

The next paper was read by Dr. E. H. Butterfield, of Ottawa, entitled, **Myocarditis Occuring in Elderly People; With Special Reference to Treatment.**

The discussion was opened by Dr. A. W. Baer, of Chicago, and continued by Dr. Robt. H. Babcock, and Dr. Hugh T. Patrick, both of Chicago.

Dr. E. J. Brown, of Decatur, contributed a paper on **Leukemia; With Special Consideration of its X-Ray Treatment.**

Dr. A. W. Baer, of Chicago, opened the discussion, which was continued by Dr. H. N. Moyer and closed by the essayist.

Dr. Frank P. Norbury, of Jacksonville, read a paper entitled **Mental Disorders of Neurasthenia.**

The discussion of this paper was participated in by Drs. L. Harrison Mettler, Hugh T. Patrick and H. N. Moyer, all of Chicago.

Dr. Robert H. Babcock, of Chicago, addressed the section on **Tuberculosis in Young Children; With Report of Two Non-Tuberculous, But Suspected, Cases That Illustrate Some of the Points of Differential Diagnosis.**

Dr. L. Harrison Mettler, of Chicago, concluded with a paper entitled **Multiple Neuritis,** which was discussed by Dr. F. P. Norbury.

On motion the section adjourned until 2 P. M.

First Day—Afternoon Session.

The section reconvened at 2 P. M., and was called to order by the Chairman, Dr. Pettit.

The first paper of the afternoon was read by Dr. Hugh T. Patrick, of Chicago, entitled, **Some Disorders of Sleep.**

The discussion was opened by Dr. H. N. Moyer and closed by the essayist.

Dr. J. Whitefield Smith, of Bloomington, followed with a paper entitled, **Defects of Vision and Hearing in the Public Schools.**

The discussion was opened by Dr. N. H. Pierce, of Chicago, continued by Drs. H. N. Moyer and Jos. C. Beck, of Chicago, and closed by the essayist.

The next paper was read by Dr. Thos. H. Bath, of Bloomington, entitled **Mosquitoes and Malaria.**

The discussion was opened by Dr. Wm. E. Quine, of Chicago, and closed by Dr. Bath.

Dr. F. A. Guthrie, of LaSalle, read a paper entitled, **Pancreatitis; With Report of a Case,** after which the society, on motion, adjourned until Wednesday at 9 A. M.

Second Day—Morning Session.

The section was called to order at 9 A. M. by Chairman Pettit.

After a few announcements by Dr. Mammen, chairman of the Local Committee of Arrangements, Dr. Pettit announced that the special order of business for the morning was the reading of the papers comprising the symposium on tuberculosis, after which the society would go into executive session to discuss ways and means.

The following papers constituted the symposium.

Mortality From Tuberculosis in Illinois for the years 1902 and 1903. By Dr. Geo. W. Webster, Chicago.

Factors Causing Tuberculosis and Aiding its Spread. Suggestions for its Prevention. By Chas. L. Mix, M. D., Chicago.

Diagnosis of Pulmonary Tuberculosis. By Frank Billings, M. D., Chicago.

The Treatment of Pulmonary Tuberculosis. By Robt. B. Preble, M. D., Chicago.

The Annual Economic Loss to Illinois From Tuberculosis. By Homer M. Thomas, M. D., Chicago.

The Duty of the State in Restricting Tuberculosis. By H. N. Moyer, M. D., Chicago.

On motion of Dr. Pettit, the association resolved itself into a committee of the whole, with the view to discussing ways and means for the prosecution of this work, and that the laity be invited to participate in the discussion. Carried.

The discussion on these papers was opened by Dr. J. W. Pettit, and continued by Dr. J. A. Egan, Springfield, General Dickey, Bloomington and Dr. Thos. H. Bath, Bloomington.

Dr. Ethan Allan Gray, of Chicago, moved that the association recommend to the House of Delegates the appointment of a committee on Tuberculosis, whose duty shall be to adopt and carry out measures for the prevention and spread of tuberculosis. Seconded. Carried.

Adjourned.

Second Day—Afternoon session.

The section reconvened at 2 P. M., and was called to order by the Chairman, Dr. Pettit.

Dr. Arthur R. Elliott, of Chicago, opened the program with a paper entitled **Bacteriuria; With Special Reference to Colon-Bacilluria.**

Dr. N. S. Davis, of Chicago, followed with a paper on **Relationship of Excretion of Common Salt to Dropsy and Renal Disease.**

Dr. Arnold C. Klebs, of Chicago, contributed a paper on **The Pneumonia Problem.**

The paper was discussed by Dr. Davis, of Chicago, and by the essayist, in closing.

The next paper was contributed by Dr. Chas. T. Whalen, of Chicago, entitled, **The Treatment of Pneumonia.**

The discussion on this paper was opened by Dr. Ethan Allen Gray, of Chicago, and closed by Dr. Whalen.

Brain and Sinus Diseases, Resulting From Purulent Otitis Media, was the title of a paper contributed by Dr. A. H. Andrews, of Chicago.

The paper was discussed by Dr. I. N. Danforth, Chicago.

Radio-Activity, was the title of a paper read by Dr. J. C. Sullivan, of Cairo.

Dr. George T. Palmer, of Chicago, followed with a paper entitled **The Mineral Springs of Illinois; Their Therapeutic Application.**

Dr. I. N. Danforth, of Chicago, discussed the paper.

Dr. E. P. Cook, of Mendota, read a paper on **Lumbar Puncture; Its Value in Diagnosis and Treatment.**

This paper was discussed by Dr. E. C. Franing, of Galesburg; John F. Sloan, of Peoria, and, in closing, by Dr. Cook.

Dr. M. H. Mack, of Chicago, followed with a paper on **Atonic Dilations of the Stomach; With Report of Cases; Also Methods of Treatment.**

The paper was discussed by Dr. J. C. Cook, of Chicago.

At this juncture the Chair appointed the following Nominating Committee, with instructions to report immediately after the call to order of the next day's morning session of the section:

Dr. John C. Cook, of Chicago, Chairman; Dr. T. J. McAnally, of Carbondale, and Dr. Burke, of LaSalle.

Adjourned.

Third Day—Morning Session.

The section was called to order at 9 A. M. by Dr. Wm. E. Quine, in the absence of the Chairman, Dr. Pettit.

The report of the Nominating Committee was called for, and said committee reported as follows:

Chairman: Dr. M. S. Marcy, of Peoria.

Secretary: Dr. Fred. C. Zapffe, of Chicago.

On motion, the report of the committee was adopted.

There being no further business before the section an adjournment was taken sine die.

J. W. Pettit, Chairman.
E. B. Montgomery, Secretary.

Minutes of Section Two.

Chairman, Dr. Emerson M. Sutton, of Peoria.
Secretary, Dr. Rudolph W. Holmes, of Chicago.

First Session, May 17, 1904.

The Section was called to order by the Chairman at 9:30 A. M.

Dr. Willis O. Nance, of Chicago, read a paper on **Acute Infantile Middle Ear Inflammations.**

Dr. Norval H. Pierce, of Chicago, followed with a paper entitled **Remarks on and Reports of Additional Cases of Sigmoid Sinus Thrombosis from Middle Ear Suppuration.**

The discussion on these two papers was opened by Dr. Tivnen, and continued by Drs. Pierce, Ballenger, Eisendrath, and the discussion closed by the essayists.

Dr. H. W. Chapman, of White Hall, read a paper entitled **A Case of Mastoid Operation Embracing Unusual Features.**

Dr. R. R. Campbell of Chicago, read a paper on **The Differential Diagnosis Between Pseudo-Membranous Angina of Syphilis, and Angina of Diphtheria.**

This paper was discussed by Drs. Beck, Ryan, Ballenger, and the discussion closed by Dr. Campbell.

Dr. William H. Wilder, of Chicago, read a paper on **Infectious Ulcers of the Cornea.**

Dr. J. H. Taylor, of Bloomington, presented **Some Clinical Facts in Eye and Ear Work.**

These papers were discussed by Drs. Nance, Beck, Marcy, and, in closing, by the essayists.

Dr. J. L. Wiggins, of East St. Louis, read a paper on **Gall Stones.**

Dr. D. N. Eisendrath, of Chicago, followed with a paper entitled **Some Interesting Cases of Subcutaneous Injuries of the Abdominal Walls and Viscera,** which was discussed by Drs. Wiggins, Ochsner, Lewis, Pennington, Gunn, and the discussion closed by the essayist.

Adjourned.

Second Session, May 17, 1904.

The Section was called to order by the Chairman at 2 P. M.

Dr. S. C. Stremmel, of Macomb, read a paper on **Appendicitis,** which was discussed by Drs. Ochsner, Wiggins and Eisendrath.

Dr. H. H. Whitten, of Peoria, read a paper on **The Medical Treatment of Eclampsia,** which was discussed by Drs. Brown, Van Horne, Holmes, and Bacon.

Dr. M. L. Harris, of Chicago, read a paper on **Cholecystitis,** which was discussed by Drs. Mammen, Ries, Van Horne, and the discussion closed by the essayist.

Dr. A. E. Halstead, of Chicago, read a paper entitled **Report of a Case of Subcecal Hernia.**

Dr. J. R. Pennington, of Chicago, read a paper on **The Office Treatment of Fissure in Ano,** which was discussed by Dr. Christy, and, in closing, by Dr. Pennington.

Dr. J. F. Percy, of Galesburg, read a paper entitled **Report of a Case of Intestinal Obstruction, with Remarks as to the Treatment Followed.**

Discussed by Dr. Ochsner.

Dr. A. F. Stewart, of Oneida, read a paper on **Indications for Surgical Intervention in Gastric Ulcer,** which was discussed by Drs. Ochsner and Christy.

Adjourned.

Third Session, May 18, 1904.

The section was called to order by the Chairman at 9:15 A. M.

Dr. Henry F. Lewis, of Chicago, read a paper on **Some Practical Points in the Diagnosis and Treatment of Placenta Previa,** which was discussed by Drs. Bacon, De Lee, Roach, Holmes, and, in closing, by the essayist.

At this juncture Dr. A. J. Ochsner, of Chicago, delivered the Address of Section Two, se-

lecting for his subject **The Surgical Treatment of Gall-Bladder Diseases.**

Adjourned.

Fourth Session, May 18, 1904.

The Section was called to order by the Chairman at 2:15 P. M.

Symposium on Carcinoma.

Papers were read as follows:

(a) **Etiology and Pathology of Carcinoma,** by Dr. Gustav Futterer, of Chicago.

(b) **Carcinoma of the Gastro-Intestinal Tract,** by Dr. J. B. Murphy, of Chicago.

(c) **The Ultimate Results of Operation for Cancer of the Breast,** by David W. Graham, of Chicago.

(d) **Cancer of the Uterus,** by Dr. E. Mammen, of Bloomington.

(e) **The Geographical Disposition and Medical Treatment of Cancer,** by Dr. W. C. Bowers, of Decatur.

The discussion on this symposium was opened by Dr. Bevan, and continued by Drs. Turck, Percy, Wagner, Pusey, Goldspohn, and the discussion closed by Dr. Murphy.

Symposium on Eclampsia.

Papers were presented as follows:

Pathology of Eclampsia, by Dr. Frank W. Lynch, of Chicago.

Operative Delivery in Eclampsia, by Dr. Charles S. Bacon, of Chicago.

The discussion was opened by Dr. De Lee, and continued by Drs. Lobdell, Lewis, Newcomb, Holmes, Chapman, Maley, and the discussion closed by the essayists.

Adjourned.

Fifth Session, May 19, 1904.

The Section was called to order at 9:15 A. M., by the Chairman.

Dr. J. H. Franklin, of Spring Valley, read a paper on **Empyema,** which was discussed by Drs. Wagner, Goldspohn, Sutton, and the discussion closed by the essayist.

Dr. Carl Wagner, of Chicago, read a paper entitled **The Porro Operation: Carl Wagner's Modification,** which was discussed by Dr. Holmes, and in closing, by the essayist.

At this juncture the Chair appointed as a Nominating Committee for nominating officers for the Section, Drs. Montgomery, Graham and Connelly.

This Committee subsequently reported, as Chairman of the Section for the ensuing year, Dr. Geo. L. Eyster, of Rock Island, and Dr. Wm. H. Wilder, of Chicago, Secretary.

On motion, these gentlemen were duly elected officers of the Section for the ensuing year.

Dr. E. B. Montgomery, of Quincy, then read a paper on **Symphyseotomy in Persistent Mento-Posterior (Face) Presentation, with a Report of a Case,** which was discussed by Drs. Lewis and Goldspohn.

Dr. Palmer Findley, of Chicago, presented a paper on **The Value of Systematic Blood Examinations in Gynecology.**

Discussed by Drs. Fairbrother, Andrews, and in closing, by the essayist.

Dr. Albert Goldspohn, of Chicago, read a paper entitled **Why Digital Exploration Through the Internal Inguinal Rings Should be made in Conjunction with Every Alexander Operation.**

Discussed by Dr. Findley, and, in closing, by the essayist.

Dr. George W. Newton, of Chicago, read a paper on **Cystic Tumors of the Ovary.**

Dr. E. Wyllys Andrews, of Chicago, presented **A Phantom or Model for Illustrating Herniotomy and Suture Work on the Abdominal Parietes.**

Discussed by Drs. Lewis, Goldspohn, Uran, and the discussion closed by Dr. Andrews.

Dr. Denslow Lewis, of Chicago, read a paper entitled **Immediate Abdominal Sections,** which was discussed by Drs. Maley and Goodell, and the discussion closed by the essayist.

On motion of Dr. Henry F. Lewis, the thanks of the Section were extended to the officers for their excellent work during the meeting.

Adjourned **sine die.**

Marriages and Deaths.

MARRIAGES.

Chas. H. Fegers, M. D., to Miss Florence Searlees, both of McHenry, June 8.

Wilbert Petit Gilliman to Miss Marriet May Glover, both of Chicago, May 24.

Wm. O. Sheller, M. D., Big Rock, to Miss Emma Frost, of Chicago, May 13.

DEATHS.

Crow, James T., Carrollton. A graduate of the St. Louis University in 1854, died at the Insane Hospital in Jacksonville, about the 10th of June, aged 75. Dr. Crow had practiced medicine 38 years in Carrollton and was greatly beloved by the entire population of that city.

Cole, W. C., Jacksonville. Assistant physician at the Central Hospital for the Insane, died June 28th, aged 64, from uraemic poisoning. Dr. Cole graduated from the Louisville Medical College, Kentucky, in 1872, and had practiced in Morgan County since 1873. He was twice president of the Morgan County Medical Society and was a member of the State Medical Society.

Davis, Nathan Smith, Chicago. Died June 15, aged 87. For extended notice of Dr. Davis' life see article by Dr. John H. Hollister in our other columns.

Johnston, Elmer A., Danville, June 3, aged 36. Dr. Johnston died at the home of his parents in Champaign of cancer of the face.

Lawless, James, Chicago, June 10, aged 60.

Dr. Cooper of Galesburg will locate in Kilbourne, Mason County.

Dr. H. O. Bades of Ashland Boulevard has returned form a six months trip in California.

Dr. Edwin C. Williams of 31 Washington st., Chicago, has returned to the city after an absence of two months in Europe.

The Illinois Medical Journal.

The Official Organ of the State Medical Society.

JULY, 1904.

NEXT ANNUAL SESSION, ROCK ISLAND, MAY 16, 17, 18, 1905.

OFFICERS:

PRESIDENT—W. E. QUINE, Chicago.
FIRST VICE PRESIDENT—H. C. MITCHELL, Carbondale.
SECOND VICE PRESIDENT, J. F. PERCY, Galesburg.
SECRETARY—EDMUND W. WEIS, Ottawa.
TREASURER—EVERETT J. BROWN, Decatur.
EDITOR—GEORGE N. KREIDER, Springfield.
ADVERTISING MANAGER—MR. LOUIS O. EDDY, Marshall Field Building, Chicago.

SECTION ONE.

Practice of Medicine, Medical Specialties, Materia Medica, Therapeutics, Etiology, Pathology, Hygiene, State Medicine and Medical Jurisprudence.

M. S. Marcy ..... Chairman
Peoria.

Fred Zapffe,
1764 Lexington st., Chicago.

SECTION TWO.

Surgery, Surgical Specialties, and Obstetrics.

Geo. L. Eyster.....Chairman
Rock Island.

W. H. Wilder ..... Secretary
103 State st., Chicago.

Committee on Prevention of Tuberculosis.

J. W. Pettit, Ottawa.
C. L. Mix, Chicago.
J. F. Percy, Galesburg.

Committee on Public Policy and Legislation.

Frank Billings, Chicago.
Carl E. Black, Jacksonville.
J. W. Pettit, Ottawa.
The Pres. and Sec'y, Ex-Officio.

Committee on Scientific Work.

M. S. Marcy, Peoria.
Geo. L. Eyster, Rock Island.
The Pres. and Sec'y, Ex-Officio.

The figures before the names of the Councilors refer to the Councilor Districts.

The Council.

(1) J. H. Stealy, Freeport.
(2) W. O. Ensign, Rutland.
(3) M. L. Harris, Chicago.
(4) O. B. Will, Peoria.
(5) J. Whitefield Smith, Bloomington.
(6) C. E. Black, Jacksonville.
(7) E. E. Fyke, Centralia.
(8) W. K. Newcomb, Champaign.
(9) J. T. McAnally, Carbondale.

MEDICAL AND SURGICAL EXHIBITS AT THE LOUISIANA PURCHASE EXPOSITION.

During the week of June 20-25 we embraced the opportunity to attend the magnificent Exposition at St. Louis. Very little mention has been made apparently in professional Journals as yet of the noteworthy Medical and Surgical Exhibits which are to be found in the various buildings and departments of the Fair. In order that our readers may be enabled to find these Exhibits without unnecessary expenditure of time it occurs to us that it would be a good idea to mention such of them as came to our notice in the columns of the Journal. Unfortunately the limits of our columns will not permit an extended catalogue of all that is to be found. We will therefore only mention the location and character of them.

First—The exhibit of the Illinois State Board of Health in the Education Section of Hygiene of the Department of Social Economy, is situated in the northwestern portion of the Palace of Education. It clearly indicates the character of sanitary and educational work being done by the Board. The charts demonstrating the work done in the field of vital statistics, exhibited at the Bloomington meeting of the State Society, are shown in part and would have been exhibited in their entirety had it been possible to secure sufficient wall space.

In one cabinet may be found the blank forms used by the Board in its regular work; forms of death certificates, for recording births, for the classification of the causes of death, forms of authorization for the prosecution of violators of medical laws, blank certificates or licenses for physicians,

midwives and for those of other schools of practice; instructions for the shipment of dead bodies and blank certificates for embalmers and all of the many forms and blanks indicative of the great scope and breadth of the Board's work.

A glass case contains the reports of the Sanitary Investigation of the Illinois river and its tributaries, 1899, and the investigation of the Illinois, Mississippi and Missouri rivers, 1903; and the reports on Medical Education, 1880-1903, these books being displayed in uniform size and binding.

A second cabinet is devoted to mortuary statistics shown in the form of charts, indicating the work done by the Board in this direction in 1902 and 1903.

The wall space is given over to maps, charts and photographs. One of these is a large State map showing the total deaths of each county, the area, population, deaths from tuberculosis and pneumonia, the statistical matter being presented for both 1902 and 1903. Two large charts, one showing the mortality from tuberculosis and pneumonia by months of the year, for 1903, and the other showing the mortality from the same disease by the ages of the dead for the same year.

A collection of photographs of small-pox cases, collected by the Board during the epidemics of this disease in 1902 and 1903, is encased in a frame 3½by 5 feet in dimensions.

The various publications of the Board on infectious and contagious diseases, are liberally supplied on a desk in the exhibit, and are intended for popular distribution.

Circulars and publications on which the Board is now engaged, will be added to the exhibit from time to time during the progress of the Exposition.

Second—In the Government Building the Marine Hospital and Public Health Service has arranged a noteworthy exhibit of the work of that department. The most striking feature is a modern operating room showing a surgeon, his assistants and attending nurses represented in wax operating on a patient, also represented in wax, and surrounded by the furniture and paraphernalia as found in a thoroughly equipped Institution.

Third—Also in the Government Building is to be found a model of a modern battleship showing the sick bay and operating room which are models of economy in space.

Fourth—The German Medical and Surgical Exhibit in the Palace of Education occupies eight or ten rooms and contains a display of the results of the latest medical research and experiment. Only one of these we will mention. With characteristic thoroughness the Germans have collected the various plants, the pollen of which is the cause of hay-fever. They then show the serum which has been devised for the prevention and cure of this disease. The various ways in which epidemic and infectious diseases are fought by inoculation are shown by guinea-pigs which have been inoculated and killed at certain stages. There are also wax casts and photographs of a number of the most important diseases. In other rooms are wax casts of various difficult operations such as gastro-enterostomy, extirpation of the larynx for cancer, the radical operation for disease of the mastoid and cancer of the tonsil. There are also numerous wet specimens beautifully preserved which were mounted by Dr. Kaiserling, the discoverer of the fluid which bears his name. In a separate room there is a magnificent display of Ruhmkorff coils of the largest size and Roentgen tubes of the best known makers. An auditorium large enough to seat more

than one hundred is provided with a stereopticon for illustrating the lectures which are given from time to time by various distinguished visitors from the German Universities. We were privileged to hear Saturday, June 25, Geheimrath Professor Doctor Albert Hoffa of the University of Berlin deliver a lecture in this room on Coxa Vara beautifully illustrated by thin sections of the femur and X-Ray photographs of the disease thrown upon the screen by the stereopticon.

Fifth—In Sections 16-26 of the Liberal Arts Building, the German Imperial Board of Health has installed a very complete Exposition of the methods used in protecting and purifying the water supply and disposing of the sewage of the various cities of the Empire, also photographs and statistics regarding prevalence, the prevention and cure of tuberculosis according to modern researches and methods. This exhibition particularly will be interesting to Illinois practitioners at the present time.

Sixth—In the Phillipine Exhibit which covers an area of 43 acres will be found sanitary maps of the city of Manila and illustrations of the Nipa shacks occupied by the natives in which so many thousands of the inhabitants dwell and which presents, as we understand, such a serious problem to the sanitarians who are endeavoring to improve the conditions of health in our new possessions.

The various tribes inhabiting the Phillipine Islands, the Cliff Dwellers of Arizona, the hairy Ainos of Japan, and other foreigners present a rare chance to study Ethmology.

Were there nothing else excepting these exhibits we could advise our medical readers to make the journey to the Exposition to study them, but of course there is very much else to entertain and amuse. Owing to the vast buildings and great distances to be traveled we would advise the liberal use of the wheel chairs in getting about.

The grounds and buildings are kept in perfect sanitary condition and this with other object lessons which we have not mentioned must have a beneficial influence upon the health of the whole country.

COXA VARA.

This disease which was the subject of a lecture delivered by Prof. Hoffa recently in the auditorium of the German Educational Exhibit at the Worlds' Fair as mentioned elsewhere, is of such importance that we give from memory a short abstract of his remarks.

Coxa Vara was first mentioned about the middle of the 19th Century, but little attention was paid to the matter by the profession and it was forgotten until its re-discovery about 1889. While the certainty of the existence of the disease was first determined by post mortem examination the introduction of the Roentgen ray has placed it on a firm foundation as a pathological entity. It is often impossible to determine its existence without the aid of the X-Ray photograph. This disease which is an abnormal relation of the neck of the femur to the shaft, has undoubtedly been often confounded with tuberculosis of the hip joint, many of the symptoms of which latter disease are usually present. Some authorities think that Coxa Vara is always caused by a fracture of the neck of the femur, but from this opinion Professor Hoffa stoutly dissents, although he states that fracture of the neck of the femur usually results in a Coxa Vara and also believes that fractures of the neck are much more common in children than has heretofore been believed. For this reason he thinks that all obscure injuries about the hip joint

should be examined by means of the X-Ray. There is usually considerable deformity in Coxa Vara and the neck of the femur instead of forming an obtuse angle with the shaft is often at a right angle to the shaft. The direction of the epiphyseal line in children, as shown by the X-Ray photograph, is another diagnostic point in the disease. By reason of the change in the relation of the neck of the bone to the shaft there is a charactistic deformity, which, while resembling ordinary tubercular disease is easily diagnosed when proper care is taken. It is also necessary to differentiate from arthritis deformans which has been found to be also much more frequent in the young than was believed before the advent of the X-Ray. Coxa Vara appears often to be a congenital condition and frequently is coincident with rachitic disease of the femur.

IN MEMORIUM PATRIS SOCIETATORUM.

The news of the death of Dr. Nathan Smith Davis has been given to the world. At the close of a long and most eventful life this eminent man rests from his labor and his earnest prayer that he might "go home" has been answered.

When the unerring clock of time tolled the hour of his departure, his years were rounded to the full; his work was finished and he was waiting patiently for the summons.

This is not the time nor the place to attempt an adequate review of such a life. At a later date arrangements will be made for a *memorial service,* in which not only his city and his state but the medical profession of the nation at large will be represented, when fitting tributes will be paid to the memory of this gifted and beloved man.

And yet while the flowers are still fresh upon that new-made grave, it seems appropriate to pass in brief review an outline of this eventful life.

Born amidst the hardy sons of toil, his was a rich ancestral heritage. Cradled in a Christian home, the impress of those early environments was manifest through all the later years.

His student life was spent in the far-famed academy of Cazenovia, N. Y. At the early age of twenty years he received his medical diploma from the College of Physicians and Surgeons at Fairfield. For a brief period he practiced at Binghamton, but soon his ambition impelled him to a larger field, and in 1847 he had located in New York City. Very soon he was appointed demonstrator of Anatomy and Lecturer on Medical Jurisprudence in the New York College of Physicians and Surgeons.

In 1849 he accepted a call to a professorship in Rush Medical College in Chicago, and from that date, among all this people, his name has been a household word.

No one man of his city has ever written as many prescriptions as he, and no man probably ever will. No man of his city has visited the bedside of so many that were poor and sick and suffering, where there was no hope of reward save their gratitude, as he, and probably no man ever will.

This generous beneficence was not only manifest in the first years of his practice but after fifty-five years of continuous service for the helpless, but was just as conspicuous during the last years of his life as at the first.

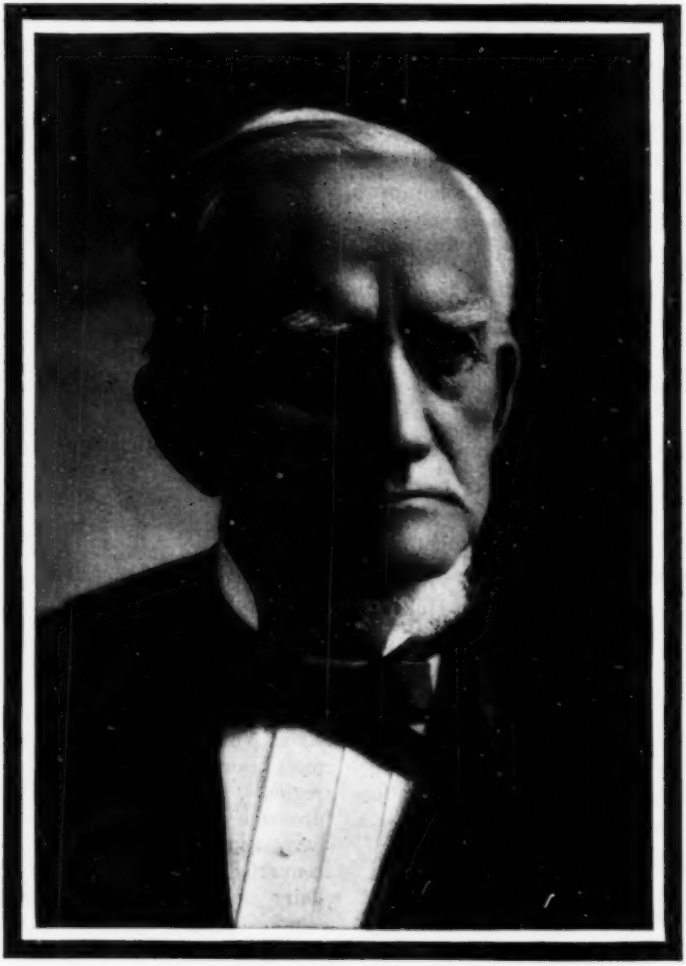
In matters of pure disinterested benevolence, in the giving of himself to the needs of the poor, his life is without a parallel and probably will remain so.

But while thus closely related to his patients, and these embraced all classes of people, by common consent he has been the

leading organizer of medical institutions in this country. By common consent he has long been styled "The Father of the American Medical Association."

instruction, till then unknown upon this continent, but now universally adopted.

He was the president of the International Congress held at Washington, in 1887.



NATHAN SMITH DAVIS.

Half tone furnished by courtesy of the Journal A. M. A.

In the fulfillment of a long cherished purpose, with a few others, he threw his whole energies into the founding of a medical college whose leading purpose should be that of formulating a system of graded

As a guiding spirit in all matters medical he has received the highest honors whether national, state or civic, that it has been within the province of the profession to bestow.

As a writer, he was the author of a voluminous work on medical practice in which were embodied the results of a life-long experience.

He was the founder and first editor of the Journal of the American Medical Association. He also founded the Medical Examiner and gave largely of his time and means to its development.

By all odds, as the champion of total abstinence from the use of alcohol as a beverage, and in most cases as a medicine, he was the Nestor of the medical profession.

By his death, the Northwestern University loses its first formally appointed trustee, and to him is largely due the present affiliation of the Chicago Medical College with that institution.

In his home life, in his church life, and in all civic relations, that life has been ideal.

It remains for tongues that are eloquent and for pens that are facile, to render tributes so justly due to the memory of *Doctor Nathan Smith Davis.* J. H. Hollister.

BOOK NOTICE.

Arteria Uterina Ovarica, the Utero-ovarian artery of The Genital Vascular Circle, Anatomy and Physiology, with their Application in Diagnosis and Surgical Intervention. Byron Robinson, B. S., M. D., Chicago—E. H. Colegrave, Chicago, 1903.

This monograph, which according to the author is based upon fifteen years of expermintal research and practical work as a gynecologist, has recently been issued in book-form and seems to cover an important part of female anatomy which had not previously been thoroughly considered. The work has been thoroughly done and is illustrated by one hundred and seventeen diagrams and plates. We can commend its reading to all those interested in this subject.

Correspondence.

The Tent Colony for the Treatment of Tuberculosis.

OTTAWA, ILL., June 21, 1904.

It is apprehended that the greatest obstacle we will encounter in securing an appropriation for State Sanatoria will be the difficulty in convincing the public in general, and legislators in particular, that tuberculosis can be cured in this climate. The belief that certain attributes of the atmosphere, such as rarity, dryness, equable temperature, etc., etc., are necessary, has become so firmly established that it need not be surprising if we find it difficult to convert the skeptical to a contrary belief.

In anticipation of this obstacle, it is the opinion of those who have given the subject most attention that an object lesson, which shall demonstrate the improvement or cure of a few of these cases in this climate, will have greater weight than an argument based upon what has been done for a multitude of cases in other states. With this end in view, I have been induced to start a tent colony at Ottawa.

The site selected is ideal in every respect for the open air and dietetic treatment of tuberculosis. It is on a high bluff overlooking the city of Ottawa, the Illinois and Fox River Valleys, in the midst of some of the most beautiful scenery of this justly famous region. The water supply is excellent; drainage perfect; easily accessible by trolley cars; camp will be lighted by electricity; connected by telephone; milk supplied from dairy one-quarter mile distant; abundant supply of fresh eggs, fruits and vegetables in immediate vicinity. In fact everything to make tent life not only comfortable, but even luxurious. The tents will be large, and of the best material, thus insuring protection from the elements. Trained nurses and other help provided.

It is not intended to demonstrate how cheaply patients can be maintained, but how comfortably and well, therefore those of the better class need have no hesitancy about

making application for admission. In fact this is the class whom we are seeking to secure.

The expense to patients will be actual cost of maintenance, no charge being made for medical services. The service will be equal to that of a first class hospital. It is estimated that it will cost $10 per week to maintain patients according to the standard which has been established. The cost of equipment is included in this estimate.

I have been much embarassed by the report that has been published, stating that the cost will be about $18 per month. For obvious reasons this is impossible. The statement did not originate with me.

In order to make the demonstration most effective in influencing the next legislature, it is desirable to commence immediately. Those interested in this work, will confer a great favor by assisting me in securing a few patients at once.

The success of the experiment will be fully reported from time to time through the usual channels. Physicians, the friends of patients, and others interested will be welcomed as visitors to the camp.

Inasmuch as my motives are not selfish, I ask the moral support of the profession in making this enterprise a success.

J. W. Pettit,
Chairman Committee on Tuberculosis,
Illinois State Medical Society.

State Items.

Dr. Norval H. Pierce of Chicago has gone to Europe.

Dr. Alex C. Wiener of Chicago has gone to Europe.

Dr. and Mrs. Ferd. C. Hotz of Chicago will spend the summer in Germany returning the first of October.

Dr. Sarah Hackett Stevenson who has been in the hospital at Battle Creek, Mich., for some months has recovered sufficiently to return to Chicago. Her many friends will be pleased to hear of her progress towards recovery.

The St .Bernard Hotel Dieu Hospital of the Hospitaller Sisters of St. Joseph, Sixty-fourth street and Harvard avenue. The cornerstone of this hospital was laid Sunday, June 26, by Arch-Bishop Quigley and a large body of assisting priests in the presence of twenty thousand persons. The hospital will cost more than $200,000. It will be 220 feet in length with a depth of 120 feet, and will be five stories high surmounted by a dome of pure white marble. The front will be of white Georgia marble, and the side and rear walls of pressed brick. Three hundred patients can be accommodated.

Chicago Medical Society Has Annual Meeting in Schiller Building—Has Growth of Membership.

Dr. John B. Murphy was elected president of the Chicago Medical society at the annual meeting in the Schiller building. Frank X. Walls was re-elected secretary and Dr. R. B. Preble, the outgoing president, Dr. M. L. Harris, Dr. A. D. Bevan, Dr. I. N. Danforth, and Dr. James H. Stowell were elected to the board of council.

Dr. Preble gave the annual president's address. He congratulated the society on its growth during the last year and prophesied that it soon would have enrolled every reputable physician in Cook county.

The secretary's report showed assets of the society to be over $12,000, with no liabilities. The membership is 1,512, having increased this year 224.

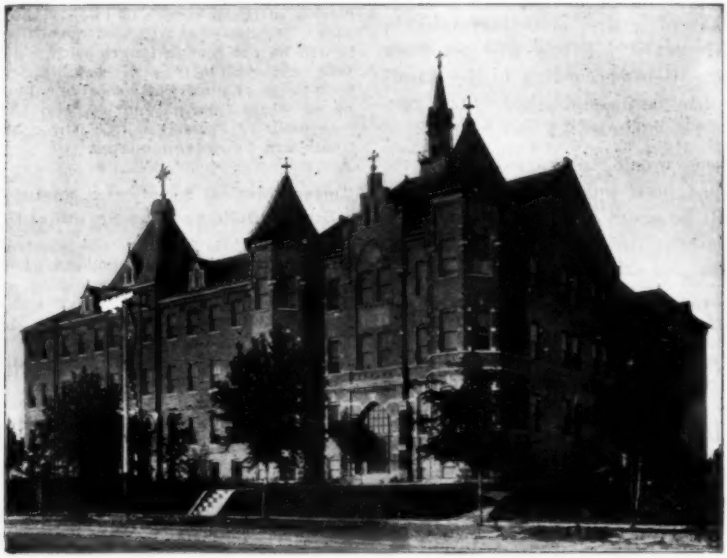
Colfax, McLean County, a town of 1,200 inhabitants has been having great trouble over a scandal involving a prominent physician. The facts were brought out in the United States Circuit Court at Springfield recently by the trial of Byron Robertson of Colfax for taking from the mail a letter directed to Miss Hattie Waldo, the assistant postmaster at that place. The letter was ostensibly written by Dr. X, a physician, and was of such a compromising character that it caused much trouble in the community. It is understood that the affair had its root in trouble between Robertson and Dr. X. and when he received the letter he made it public to the great embarrassment of Miss Waldo. Dr. X. admitted writing the letter, but it was shown that Miss Waldo had never received it and was ignorant of its contents. The case was being fought out stubbornly and many witnesses, including two former postmasters at Colfax, and many prominent citizens, were upon the stand. It is pretty clearly understood that Robertson made the letter public to get even with Dr. X. who had exposed some of his former correspondence with a married woman at Colfax.

At the conclusion of the trial Robertson was given a six months sentence in jail. As a further result of the unfortunate affair Dr. X. was obliged to leave the town.

St. Francis Hospital, Freeport.

We present by the courtesy of Official Reporter, Dr. R. J. Burns, a cut of St. Francis Hospital, Freeport, which has been recently enlarged and rededicated by Arch-Bishop Quigley of Chicago.

The Daily Democrat of June 8, 1904, gives an extended account of the elaborate ceremonies attending that function. It also contains a description of the entire structure from which we learn that the hospital was first opened in 1890. It was then a small affair and accom-



ST. FRANCIS HOSPITAL, FREEPORT.

modated besides the sisters, a number of orphans. As has been the case in nearly every community blessed by the presence of the nursing sisterhood, there has been a rapid growth of the number seeking accommodation in the institution. Soon the orphans were provided with a separate building and within ten years the hospital was taxed to its utmost to accommodate the afflicted. The hospital now contains 100 beds and twenty-three sisters minister to their wants. The total value of the plant is stated to be $100,000, the last addition costing $47,000. No mention is made in the Democrat of the valuable services rendered to the hospital and the community by the medical profession living and dead. This we are sure is an oversight which should be remedied for certainly without their valuable assistance freely rendered, these institutions would not be possible. It is nothing but justice to give them their due meed of praise on these public occasions.

County and District Societies.

FULTON COUNTY MEDICAL SOCIETY.

Regular meetings are held the first Tuesday of of May, July, October and December.
Membership 43.

Officers.

President.....C. S. Scholes, Canton
Secretary-Treasurur.....D. S. Ray, Cuba

The twenty-sixth annual meeting of the Fulton County Medical Society was held at Cuba, May 3, 1904.

Called to order at 1 p. m. by President Scholes.

Members present—Scholes, Strode, Robb, Coleman, Stoops, Cluts, Schallenberger, Ray, Rogers and Oren; visitors, Percy of Galesburg, Fleming of Ipava, and Clark of Fiatt.

Dr. Percy, secretary of the judicial council of the Illinois State Medical Society, gave an able address on the needs of organization of the medical profession and enumerated some of the difficulties encountered in perfecting such an organization. The following is but a very brief synopsis of only a few of the many good points presented.

Practical necessity of organization was aptly illustrated by reference to the futile efforts of the medical profession to secure recognition from the state legislature, while the farmers of his county who are organized readily secured the passage of a bill enabling them to sell their products in the city without paying for a license.

The members were reminded that the present method of affiliating with the state organization was not the workings of a clique or, in political parlance, of a machine, but the result of deliberations of the national and state organizations, had been widely discussed in the medical press and adopted at a regular meeting of our state society. It was adopted as the only satisfactory basis for the organization of the medical profession, is exceedingly successful, is becoming adjusted nicely and will eventually work out all right.

As to the question of irregulars, always get in the regulars first and then go out after those a little off in color, being charitable enough to remember that they may be as honest and honorable as you or I, but from position, circumstances, or environments do not consider ethical matters as we do, while if given an opportunity and properly encouraged would do better. The majority of them want to do right if given a chance. Agreements may be gotten up that are not objectionable to most of them, the most important point being that no member can belong to any other state medical society except the Illinois Medical Association. This was a wise provision adopted by the state society. It is breaking down the various elements that have always kept the medical men apart, resulting in a harmonious union in one state organization.

Among the little matters contributory to the success of county societies are the following:

Each county society should have printed stationery which is not only in line as a first class business proposition but also in keeping with the dignity and respect of the profession.

Every secretary should have a card index bearing the name of members in the county where and when graduated and the general standing in the profession. This for the purpose of keeping track of every member as to his location and character. A national directory under the supervision of the profession will be the outgrowth of this which is already being taken up by the state organizations.

A defense fund to defend the members against mal-practice suits is to be considered at no great distant day. In the city of Chicago where most of the physicians are protected by a similar fund one-third of the cases are nolleprosèd or given up as soon as it is discovered that the defendant has this protection thus relieving the physicians from a black mailing scheme that is increasing with a frightful rapidity all over the country, especially in the cities.

The heart of every county society is its secretary and no one is as a rule more mistreated. His inquiries for information or requests for contributions to the regular program are frequently ignored altogether or come in too late to be of any value, and his efforts to secure good attendance are usually fruitless. The most invariable answer to the question, "What is the greatest difficulty you have in perfecting a county society," is "apathy." The physicians do not take the interest in this matter that they should. Most every other profession or trade has a perfect organization in keeping with the age and if we maintain our dignity and respect and be in a position to do our duty to suffering mankind we must be in a position where we can exercise the first law of nature.

Invite intelligent laymen into your meetings. Let them know that these meetings are for other objects and purposes than the consideration of fee bills.

Quackery receives more support from the clergymen than from any other profession. Many of them, unintentionally give recommendations to preparations that are nothing else than inferior intoxicating drinks. These recommendations are printed in bold type and scattered over the land through the various advertising channels. Thus worthless if not harmful preparations are thrust upon the unsuspecting public by a profession that enjoys unlimited confidence and respect. The frequency of such instances may be accounted for in a great measure by overworked clergymen casting about for something to bring back the energy and health that they once possessed, accepting some of the many gratuitous propositions that they all are daily receiving and while under the condition of euphoria that the first few doses cause feel that courtesy demands and that the result justifies them in giving the firm a strong recommendation in return for their gratuitous medicine. It has been openly charged that certain prominent clergymen as well as statesmen receive regular contributions from firms who receive benefits of such recommendations. Get them to attend your meetings and point out to them the injustice that they are guilty of, many of them unintentionally so it is true, and great good will result. We want to work for the repeal of all laws permitting the practice of quackery substituting more perfect laws including renewal of license yearly with forfeiture clause if holder becomes itinerary.

To obtain these desirable conditions party politics must be lost sight of. It is of little importance to us whether a representative or judge is a democrat or republican so long as they do not split hairs in making the fine distinction or ruling that Osteopathy or Christian Science is practicing medicine in contradistinction to those who say it is not. Make the politician who favors quackery stay at home. Help the weak professional brother rather than kick him out and make a bushwhacker out of him.

Most of these conditions have been realized in some states. In Alabama for 38 years no state board of health or state medical officer has been appointed by the governor without first consulting the state medical society. In the way of legislation they have never asked for any-

thing but what they got it but have been very careful to ask for nothing but that which was for the good or benefit of the general public.

There are those who favor doing away with all medical laws. In New Zealand where such a condition exists perfect chaos reigns. Reputable men are growing less and less each year and are being crowded out by pure quackery which is supported by an ever gullable public. When one fad is proven false a new one is ready to take its place.

On motion of Dr. Coleman a vote of thanks was tendered Dr. Percy for his admirable address.

Minutes of previous meeting read and approved.

Dr. Shallenberger presented a paper on typhoid fever. Among the important points touched upon was the importance of an early diagnosis and sanitary measures also a plea for the establishment of a laboratory for bacteriological and microscopical examination that would give the active practitioner valuable information which time and facilities prevent him from securing.

Dr. Robb coincided with the author and advised the consideration of all cases with diurnal exacerbation of fever and diarrhoea with great suspicion and that where the fever in such cases does not break in 48 hours the great probabilities are that the case is one of typhoid fever. In all cases use care and disinfectants until we know they are not typhoid. The common house fly, water and milk are potent factors in the spread of the disease. In a large per cent of cases periodic chills occur which are attributed to absorption of some poison that effects the sympathetic nerves.

A general discussion was taken by all present and the author closed by cautioning against too much treatment, asserting that most cases would get well with good nursing and without any medicine.

Dr. C. L. Oren presented a good paper on Trachoma.

The president appointed Drs. Coleman, Oren and Robb to select the next meeting place. Their report in favor of Canton was adopted. The meeting to be held July 5th. The subject of making Canton the permanent meeting place for the society was favorably commented on by many present.

Collections.

	County Dues.	State Dues.	Total.
A. C. Cluts	$4.00	$1.50	$5.50
W. E. Shallenberger		1.50	1.50
F. C. Robb	1.00	1.50	2.50
W. S. Strode	2.00	1.50	3.50
J. E. Coleman	1.00	1.50	2.50
Totals	$8.00	$7.50	$15.50

On motion Dr. S. A. Oren was made alternate to the Bloomington State meeting.

D. S. Ray, Secretary.

LOGAN COUNTY MEDICAL SOCIETY.

Officers.

President, J. L. Lowrie.....Lincoln
First Vice-President, L. F. Curtis.....Elkhart
Second Vice-President, Maskel Lee.....Atlanta
Secretary, H. L. Oyler.....Lincoln
Treasurer, W. H. Kirby.....Chestnut
Membership 20.

The Logan County Medical Society held its regular June meeting in the City Council Chamber, City Hall, Lincoln, June 16, 1904, at 7:30 P. M., President J. L. Lowrie in the chair.

Members present: J. L. Lowrie, A. M. Sargent, C. C. Montgomery, C. E. Rembe, J. R. Barnett, H. S. Oyler of Lincoln and P. H. Oyler of Mt. Pulaski. Visitors: Dr. Rhodes of Lincoln, Dr. Williams of Hot Springs, Ark., Dr. King and Penning of Chicago, Ill.

Minutes of April meeting read and approved.

Application for membership received from R. L. Frisbie of Lincoln, a graduate of the Marion Sims College of Medicine, class of 1894. C. C. Reed of Lincoln, graduate of the Rush Medical College, class of 1878.

H. L. Cosby of Lincoln, graduate of Rush Medical College, class of 1889.

All applications were favorably acted upon and same received into full membership.

The subject for the consideration of the society was **Pneumonia.** The subject being divided into three papers, pathology, diagnosis and treatment. The essayist taking the diagnosis was unable to be present.

H. S. Oyler of Lincoln read a paper on the **Pathology of Pneumonia** and presented pathological specimens to illustrate the different forms of the disease. A synopsis of the paper is as follows:

Pathology holds the same relation to the diseased body that physiology does to the normal; that chemistry does to all the sciences. To know a healthy body you must know physiology—to know disease—to understand medicine and surgery or to apply them you must know pathology.

Medicine was making but slow progress when Verchow began his work in the Dead House. The birth of his cellular pathology created a new science and put medicine and surgery upon a rational basis. It proved disease to be due to disturbances of cellular action and intercellular changes. The disturbance may be brought about by the introduction of new cells as bacteria into the tissues, by chronic action, etc., but they are the cause and not the products of the disease. The more we know of the working of cell life under normal and abnormal condition, enlarging our knowledge of pathology, the more rational and specific will be our treatment.

The inflammatory processes of the lung may be divided into three classes. 1st. Croupous or Acute Pneumonia—a primary disturbance. 2d. Catarrhal or Broncho Pneumonia, involving the parenchymatous or cellular structures and is generally secondary. 3d. Chronic or Interstitial Pneumonia involving the interstitial or intercellular structures and is a secondary disturbance.

In croupous pneumonia we have an acute inflammation of the lungs which has been attributed to several micro-organisms namely. The micrococcus lanceolatus of Frankel, the bacillus pneumoniae of Friedlander, the staphylococcus and streptrococcus typhoid baccillus, diphtheria bacillus, influenza bacillus any of which will cause pneumonia under the proper conditions or any of which may be found in the respiratory tract without producing the disease. The cells are able to protect themselves from the micro-organism as long as they are functionating normally, but when their physiological function becomes pathological from any cause as irritation either chronic or from foreign particles or hyperaemia from exposure the micro-organisms become active and pneumonia develops. This suggests the reason for the larger per cent of pneumonia in our smokey cities over those of the rural districts.

The pathological changes in croupous pneumonia may be divided into three stages: engorgment, red hepatization and gray hepatization or resolution.

In engorgement or intense hyperaemia the blood vessels become dilated the blood current becomes slower, the lung assumes a dark red color, the lung is increased in sp. gr. elasticity decreased. On section it yields a frothy tenacious reddish liquid.

Red hepatization is marked by exudation of the blood serum and corpuscles into the air vesicles, this coagulates enclosing in its meshes the red and white blood cells. The lung is more solid increased in sp. gr., contains less air, is more friable. The cut surface shows little plugs of coagula protruding from the alveoli color is a dark reddish brown.

In gray hepatization the immigration of the leucocytes predominates in the alveoli the epithelium lining more swollen. The walls and contents have a more improved appearance. The fibrous material disintegrates, the red cells decolorize, the white cells undergo fatty degeneration. The sp. gr. is still greater than before as is also the density and friability and the surface on section has a grayish appearance as resolution continues the inflammatory products undergo fatty degeneration and are absorbed and expectorated. The epithelium cells of the alveolar walls and the blood vessels gradually resume the normal.

Broncho or parenchymatous pneumonia is an inflammation of the parenchymatous or celluar part of the lung. Is caused by irritation of any character affecting the bronchi. The post-mortem appearance of the lung presents many variations. The lung tissue contains a varying number of solid patches due either to collapse or inflammatory consolidation. The epithelium of the bronchi are inflamed and the walls thickened and containing a thick mucous. The collapsed part is depressed below the surface is of dark bluish color, tough and glistening. The pneumonic patch has the appearance of being raised and resembles gray hepatization but is firmer and dries. In resolution fatty changes take place and the contents of the alveoli are removed by expectoration and absorption the lung gradually resuming the normal.

Interstitial pneumonia is characterized by a gradual increase in the connective tissue which tends to obliterate the alveolar spaces. Is a secondary disturbance of some inflammation or persistent collapse. Is usually unilateral. The size of the lung is diminished is firm and greatly increased in sp. gr. On cut section the lung is hard, firm, shiny, dry and light in color. The openings of the blood vessels and bronchi are greatly dilated and gap open.

There is no resolution the lung continues to shrink and the cirrhosis may involve the whole side.

A. M. Sargent of Lincoln then presented the society with a very interesting paper on the **Treatment of Pneumonia**—a synopsis of which is as follows:

The constant and increasing prevalence of pneumonia and its growing mortality, is I deem a suffifficient excuse for bringing so worn a subject before the society. Few diseases have so many opposite plans of treatment. From the time Laennec to the middle of the past century almost implicit confidence was placed in the combined use of blood letting, antimony and mercury. Those remedial agents have gradually been discarded and replaced by a supporting plan of treatment. A comparison of the mortality of past with those of modern times gives a higher rate for the present time, whether this is due to a change in the character of the disease, or to a less efficient treatment, or to a lessened resistive vitality, or to a greater diagnostic accumen of modern physicians I will not discuss.

When called upon to treat a case of pneumonia you should insist upon having two nurses, one for day and one for night. The room should be large with south front, all unnecessary furniture removed temperature kept between 65° and 75° F. and an abundance of fresh air. All friends should be excluded from the room. For the initial chill put patient between blankets surrounded by hot water bottles and give hot drinks. When the pleuritic pain is manifest hot or cold applications can be applied until relief is obtained. Sometimes a mustard draft or adhesive plaster will answer better. In some cases a hypodermic injection of morphine will be required. All local applications after pain is relieved are to be discontinued. No local application can influence the pneumonic process and may prevent sleep and rest. An initial dose of calomel followed by a saline will be of benefit. The buccal cavity should be cleaned several times a day with a solution of H(1) O(2). Frequent examination of the abdomen is imperative and upon appearance of tympany free catharsis with calomel followed by a saline should be given to remove all offending material. The food should be liquid, milk and bouillon answer admirably, when these disagree as shown by flatulency and diarhoea, solid food can be substituted. A chop, steak or hard boiled egg and small piece of toast may be given. The pyrexia rarely needs attention. If it passes 105°F. then interference becomes necessary. The alcohol bath with cold application to the forehead will usually relieve if not the cold pack properly given will

reduce the fever without evil effects. The cough is often annoying and sometimes so constant that the patient cannot obtain rest. In this condition I have found that Dover's powder will lessen the frequency but if it fails then it is necessary to give morphine codeine or heroin. This latter remedy according to my experience is as disagreeable in its after effect as morphine. We are often required to choose between two evils, exhaustion upon the one hand, the depressing effect of opium upon the other.

Insomnia is to be combated by absolute quiet in the sick room and an occasional dose of trional.

The chief danger in pneumonia is from cardiac failure. Examination should be made at each visit. If both sounds are distinct the patient's condition is favorable. Cardiac failure presents itself in two ways. The first and most frequently met with is cardiac degeneration, the result of toxemia which affects principally the muscular fibres of the left heart. The other is mechanical in character and affects the right side of the heart. The management of these two conditions is different. The first occurs any time after the third day. The second occurs from the initial stroke to the period of crisis. A clinical picture of the first form. Patient is pale, face is bedewed with perspiration, extremities cold, respiration rapid shallow from 40 to 60 per minute, pulse rapid and weak. Auscultation shows that the heart sounds cannot be heard. Patient takes no notice of his surrounding. In this condition give strychnine, alcohol, strophanthus, digitalis, belladonna, oxygen, according to indications. Do not use strychnine with a sparing hand. The tenth of a grain followed by a twentieth hourly until all of the sound muscular fibres of the heart are aroused. The action of the strychnine should be aided by 1 to 2 oz. doses of whiskey or brandy repeated hourly. The quantity of alcohol to be limited only by the results. Let us study briefly the clinical picture of the second form of cardiac embarrassment. The patient is propped up in bed respirations are labored, he cries for air, face flushed, eyes congested, all his physical strength given to breathing. Inspiration shows heart's impact against the chest wall. Auscultation tells us that the left ventricle is acting powerfully. Pulse full and large but collapses immediately, showing a deficient supply of blood in left cavities. This condition does not call for heart stimulants, I think that a study of the physiological action of the salicylates upon the nutritive and functional circulation of the lungs will suggest its use for the prevention of this condition and after the condition is established, we have in venesection an heroic remedy to relieve the engorgement. While performing venesection your patient's breathing becomes easier, heart action less violent, pulse full and sustained. Now the effects of the bleeding can be maintained by the administration of the salicylates. The physician should remember that we make war upon disease only when it is necessary and not all the time as a matter of form and only when called upon by distinct indications.

The discussion of the papers was entered into by most of the members and visitors,

J. L. Lowrie of Lincoln, delegate to the Illinois State Medical Society gave a very interesting report of the meeting held at Bloomington during May.

The Society then adjourned to meet August 18, 1904.

McLEAN COUNTY MEDICAL SOCIETY.

Regular meetings are held in Bloomington the first Thursday of each month. Membership 95.

Officers.

President.....F. C. Vandervort, Bloomington
Vice President ..... A. L. Fox, Bloomington
Secretary-Treasurer.....R. A. Noble, Bloomington
Censors: C. M. Noble, J. E. Fenelon. C. E. Chapin

The McLean County Medical Society was called to order by the President, Dr. F. C. Vandervort, at 7:15, P. M.

Upon motion of Dr. Godfrey, Dr. J. W. Fulwiler was elected to act as Secretary **Pro Tem**, Kaeser being absent. The minutes of the last meeting were read and approved.

Dr. E. Mammen made a verbal report for the Committee on Arrangements for the State Society meeting, and asked to be allowed to present his report in writing at the next meeting, which was granted. His report showed that there would be about $100.00 remaining after all bills were paid.

Dr. Welch reported progress from the Committee on the History and Biography of the Members of the McLean County Medical Society. He was authorized to have a typewritten copy made at the expense of the Society.

Dr. Mammen moved that a copy of the biography of each member be sent to such member or his nearest relative for correction, before same was presented by Committee for publication. So ordered.

The following letter from Dr. A. F. Kaeser was read and his resignation as Secretary-Treasurer was regretfully accepted.

May 24, 1904.

To the President and Members of the McLean County Medical Society.

I tender my resignation as Secretary-Treasurer of your organization. This duty, with which you have twice honored me, has been a pleasant one to perform.

I hope for the present to retain my membership with you, and wish to cordially thank all the members for their courteous treatment accorded me.

I am handing you a check for $94.15 the balance due the Society. Explanatory to my successor, I would say that all the members who have paid $2.50 since April 5, 1904 and who, are marked R $1.50 in the Treasurer's account, he must yet remit the per capita to Dr. Weis.

Wishing the Society continued success, I remain,

Fraternally Yours,

A. F. Kaeser.

Dr. R. A. Noble was nominated for Secretary-Treasurer, and on motion of Dr. Yolton,

Secretary **Pro Tem** was instructed to cast the ballot for Noble to fill out the unexpired term of Dr. Kaeser as Secretary-Treasurer.

On motion of Dr. C. M. Noble, one-half of the balance accruing from the State Society meeting, was voted to the Business Men's Association for the purpose of promoting the work of the Health Committee of that Association; the balance of the money to be turned over to the Treasurer of the Society, for such disposal as the Society orders.

The following resolution was presented by Dr. Chapin:

"Inasmuch as the Sanitary Committee of the Business Men's Association is made up of members of this Society, and in as much as the work of this Committee belongs germanely in the field of this Society,

Resolved, That the Committee in question of the Business Men's Association be made likewise the Sanitary Committee of the McLean County Medical Society. This resolution to have effect for the year 1904."

Upon vote of the Society, the resolution was adopted.

The following resolution was presented by Dr. T. W. Bath:

Whereas, Dr. Kaeser has seen fit to change his location,

Resolved, That we, the members of the McLean County Medical Society, express by this resolution, our sincere appreciation of his efficient ability during his term as Secretary of this Society, especially his able executive management during the week of the State Medical meeting held in this City. And further,

Resolved, That we bid him Godspeed in his new field and commend him to his new community and colleagues as an efficient Physician and a courteous gentleman."

Resolution adopted and copy of same ordered spread on minutes of this Society and copy sent to Dr. Kaeser.

The following bills were allowed:

Nimrod Mace, Printing.....$2.80
A. Washburn & Sons, Flowers..... 7.25

Dr. F. C. Vandervort asked to be excused to fill an engagement and called Dr. Fox to the chair.

The following names were proposed for membership in the Society: E. M. Adams, Gridley; Ralph Fox, City; Chas. Schultz, Colfax; Ralph Pearce, W. A. Coss, Danvers; H. L. Howell, City.

There being no further business, Dr. C. E. Chapin was presented and read a very able paper on **Chronic Interstitial Nephritis**, reporting twelve cases which had been under his observation during the past two years.

Dr. Chapin called special attention to the ease and frequency with which this malady was overlooked and urged upon the members the importance of being always on guard for this disease. He called attention to the importance of early and frequent Urinalysis and pointed out the early diagnostic signs to be found.

The discussion was general and the Doctor was heartily congratulated upon the able and complete manner in which he presented the subject.

The meeting adjourned to meet the first Thursday in Sept., 1904.

ADAMS COUNTY MEDICAL SOCIETY.

Regular meetings held in Quincy the second Monday of each month at 2 p. m. Membership 70.

Officers.

President ..... L. H. A. Nickerson, Quincy
First Vice Pres ..... John A. Koch, Quincy
Second Vice Pres ..... J. M. Grimes, Camp Point
Secretary ..... Geo. E. Rosenthal, Quincy
Treasurer ..... R. J. Christie, Jr., Quincy
Censors: C. D. Center, Jos. Robbins, S. B. Ashton, Quincy.
Delegate State Society..E. B. Montgomery, Quincy

The June meeting of the Society was held in the Chamber of Commerce, June 13th, President Nickerson being in the chair.

Those present were: Drs. Nickerson, Ashton, Knap, Pfeifer, J. A. Koch, Knox, J. G. Williams, Christie, Jr., Gilliland, Sigsbee, Worley, H. J. Nichols, Shango and Vasen.

The secretary read some correspondence between the local health officer and the State Board of Health as to the validity of a certificate of death signed by an osteopath. The reply of the State Board was that only licensed physicians, coroners or midwives could issue such certificates.

President Nickerson opened a discussion on the **breach of ethics committed by members entering into consultation with osteopaths.**

A general discussion followed and the matter was referred to the committee on Legislation. On motion of Dr. Christie a committee consisting of Drs. Christie Jr., Ashton and J. A. Koch, was appointed to confer with the druggists for the purpose of eliminating private endorsement of proprietary patent medicines.

Dr. Knox reported a case of a young woman with a scarlet rash erroneously diagnosed as scarlet fever.

Dr. Christie Jr., reported that the case of gastro-enterostomy mentioned as recovered at last meeting was at the present time suffering from secondary contraction and was to be operated again, result to be reported later.

Dr. Pfeiffer presented a specimen and reported a case of self-diagnosed tape worm which proved to be an exfoliative colitis. The patient was apparently free from digestive disturbances but complained of nervousness as chief trouble, the latter symptom of three years standing.

Dr. Christie Jr., asked for opinions on the treatment of tape worm.

Dr. Nickerson favored turpentine in ½ to ℑ doses. Dr. Koch uses Male Fern followed by magnesium sulphate. Dr. Shango reported a case in which ℑiii of Male Fern accomplished the desired result. Dr. Ashton reported success with Male Fern and Oil of Camella followed by large doses of turpentine and Castor Oil.

Dr. Gilliland stated that with the three varieties of Taenia, turpentine was usually efficient, recently however, he had used Peleterine. A mass made of pumpkin seed macerated, with an equal amount of sugar and a small quantity of chloroform, was favorably mentioned by him.

Dr. Knapp reported a case of exfoliative colitis following hysterectomy for multiple fibroids. Dr. Nickerson recommended the treatment of these cases by flushings and astringents.

Adjournment.

SANGAMON COUNTY MEDICAL SOCIETY.

Regular meetings are held in Springfield the second Monday of each month at 8 p. m. Membership 73.

Officers.

President ..... B. B. Griffith, Springfield
Vice President ..... S. E. Munson, Springfield
Secretary-Treasurer ..... C. P. Colby, Springfield
Directors, W. O. Langdon, R. D. Berry, C. R. Spicer

—

The Society was called to order at 8:30 P. M. by President B. B. Griffith; G. N. Kreider was appointed Secretary pro tem. There were eleven members present. The minutes were read and approved. Drs. Brittin, Nelson and Hagler, the committee appointed at the last meeting, submitted the following resolution on the death of Dr. Charles Kerr. After being read the resolution was adopted:

Whereas, It has pleased Almighty God to remove from the scenes of his earthly activities, our colleague, Dr. Charles Kerr, a worthy and respected physician of Springfield, and Sangamon County, and a charter member of this Society.

Resolved, that in the death of Dr. Kerr the profession has lost a worthy and honored member, and the city of Springfield, a prominent and public spirited citizen, and be it further

Resolved, That while we bow in humble submission to the Divine Will, the entire membership of the Sangamon County Medical Society express their sympathy and condolence, to the family and relatives of the deceased and be it further

Resolved, That a copy of these resolutions be spread upon our Minutes.

President Griffith reported that he had extended an invitation to the House of Delegates to have the State Medical Society hold its next annual meeting in Springfield but the Society had decided to go to Rock Island. Dr. Langdon moved that the next meeting be held in September. Carried. Miss Susan Merritt, who has been taking instruction in Medical gymnastics in Boston, was then introduced and explained the methods used to obtain results in deformities and various diseases by physical means under the direction of the family physician. This proved to be an interesting feature of the meeting and Miss Merritt was obliged to answer many questions as to her work. Dr. S. E. Munson then read a paper on the treatment of tuberculosis. Dr. J. A. Egan then gave an informal talk explaining the maps and diagrams which had been prepared in the office of the State Board of Health. They presented in a very graphic and interesting manner the distribution and mortality of tuberculosis in Illinois. The papers were both discussed by every member present and were heartily commended.

PEORIA CITY MEDICAL SOCIETY.

Regular meetings are held in the Observatory Building, Peoria, on the first and third Tuesdays of each month. Membership 72.

Officers.

President ..... L. A. McFadden
First Vice President ..... J. C. Roberts
Second Vice President ..... B. M. Stephenson
Treasurer ..... Jeanette Wallace
Secretary ..... S. M. Miller
Censors: E. M. Sutton, one year; A. J. Kanne, two years; F. B. Lucas, three years.

—

The Peoria City Medical Society met Tuesday evening, May 17, 1904, in the Observatory Building.

The members present were Drs. Kanne, R. D. Bradley, Roberts, Cooper, Sidley, Allison, E. L. Davis, Brobst, McFadden, and Collins.

Dr. R. D. Bradley presented a case of a child four years old, who had lesions over the body that were diagnosed as syphilitic by a majority of those present.

Dr. Collins presented a **Hodge pessary that had been placed in a vagina twenty years ago and left there.** Lately the patient had suffered from pain, and a bloody, bad smelling discharge from the vagina, and the symptoms seemed to indicate malignancy until an examination disclosed the cause of the trouble. It was deeply embedded in the vaginal tissues and had to be cut out.

Dr. Collins also presented a **chondroma,** three centimeters in longest diameter, removed from the elbow joint.

Dr. Collins reported a case of **fracture of the forearm followed by contraction of the flexor tendons.** The causes of the contraction were found to be the transfixion of the flexor muscles by the upper fragment of the ulna, and the formation of a hematoma two and one-half centimeters in diameter. The muscles were freed and the hematoma removed. A few weeks later the flexor tendons were lengthened. The ultimate result was very satisfactory and a useful hand and arm was secured. Adjourned.

The Society met Tuesday evening, June 7, 1904.

The members present were Drs. Roskoten, Whitten, Gelder, E. L. Davis, Sidley, Allison, Jeannette Wallace, Hanna, McFadden, and Collins.

The applications of Dr. W. J. Wulstein, Peoria, and Dr. W. E. Frank, Deer Creek, Ill., were read and referred to the Board of Censors.

Dr. F. K. Sidley read a very interesting paper on **Tropical Diseases; especially those relating to the Ear, Nose and Throat,** which was discussed by Drs. Roskoten, Allison and McFadden.

Dr. Whitten reported a case of **aneurism of the superior mesenteric artery** with operation and removal of the aneurism and resection of a portion of the intestine.

Dr. Sutton reported two cases of **extra-uterine pregnancy.** One was advanced to two and one-half months, and was brought to the hospital suffering from collapse due to rupture of the tube. Beginning with the toes and fingers the extremities were bandaged, with an elastic flannel bandage, to the trunk of the body. Adrenalin was administered in small doses at frequent intervals. Several hours later the pa-

tient was operated on. Active hemorrhage was occurring when the abdomen was opened, which the speaker attributed to the manipulations incident to the moving of the patient from her bed to the operating room. The second case had advanced to three and one-half months when further development had ceased. Both cases recovered. Adjourned.

S. M. Miller, Official Reporter.

OGLE COUNTY MEDICAL SOCIETY.

A Prevailing Skin Disease.

In considering the skin disease which has appeared as an epidemic in certain localities during the past year we can simplify our conclusions by eliminating age, sex and constitutional symptoms. As each sex and all ages were equally affected, with little or no constitutional symptoms, except perhaps a coated tongue, constipation and some indisposition.

The weather did not seem to affect the disease either favorably or unfavorably, as it began in the early summer lasting through the fall and winter, and gradually spreading from family to family, sometimes affecting each member, and again one or more would remain free. It is no respector of persons. The father or mother in one family, first showing signs of the disease, in another any one of the children may first break out. It spreads through a neighborhood like a slowly acting epidemic. Many could not tell when or where they had been exposed; and some children sleeping with those having the disease would not be infected. It has appeared as a chronic affection lasting for weeks and months, and yet after we learned how to treat it we could shorten its duration and greatly modify its severity.

The eruption appears as an isolated, pointed round, hard pale papule. (Its first appearence reminds you of single papules of goose flesh.) In a shorter or longer time becoming more or less flattened (and in some cases umbilicated) and irregular in shape and light; medium or dark red in color, without an inflamed base. The lesion is firm to the touch, elevated above the surrounding, is not painful, but is always accompanied with intense itching, which is always worse afternoons and evenings. The surface of the papule is smooth at first, may remain so throughout its entire course, or may be covered with scales during its later stages. In one case which was under observation for sometime, each papule surrounded a hair follicle, each papule was umbilicated and covered with dark grayish scales in its last stages, but it always remained a papule throughout its entire course. Vesicles and pustules did not appear in a single case. Crusts and blood were often visible, but in each case they were probably due to scratching. In some cases the papules were few in number and widely separated, in others they were closely set and very numerous. They may be distributed over all parts of the body or confined to one or more regions, appearing most frequently on the anterior surfaces of the forearms and wrists. Inner sides of the thighs and tibial surfaces of the legs. Occasionally the eruptions will appear on the backs of the hands, and in the more aggravated cases the body will be more or less involved.

The eruption develops without any premonitory symptoms.

Those affected say they feel perfectly well, that it is the itching which first attracts their attention, and then on close inspection they first discover the papules.

We will have to attempt a diagnosis by elimination. Papular eczema somewhat resembles the rash under consideration, but in papular eczema the papules are situated upon an inflamed base, are tender to the touch. The skin is more or less thickened, and vesicles and pustules are apt to follow, and in papular eczema the papules are not umbilicated.

The lesions of acne are confined almost entirely to the face, chest and back. Pustules and comedoes are frequently present. The more marked lesions are tender to the touch and are not usually accompanied by itching.

Psoriasis begins as a sharply defined red raised papule. Is surrounded by infiltration, covered by thick grayish scales, which on removal leaves an excoriated or bleeding surface, and all papules have a tendency to increase in size.

In Lichen Scrofulosus the papules are reddish yellow in color, do not itch, and are only observed in cases of scrofulous diathesis.

Lichen Ruber the intervening surface becomes reddened and infiltrated, and the whole system is profoundly involved. In some cases it seems to be the initial manifestation of a general breakdown. In vegetable parasitic diseases we get more yellow crusting and macluar rather than papular eruptions. The eruption caused by the animal parasites is of a hemorrhagic nature, and it would hardly seem possible that the louse or bedbug could be so widely distributed without being discovered.

The cause of this epidemic eruption is mysterious. In fact no definite cause can be found. The anemic, the plethoric, the well fleshed and the lean kind; the sanitary and unsanitary. All seem to be equally subject to the affection. However, I think this general statement can be made viz, that the disease is more severe and more rebellious to treatment when the stomach and bowels are not in perfect condition. Seasons of the year, clothing, active or sedentary habits do not seem to be a causative factor, and I cannot trace the cause to either the foods or drinks.

Is it a neurosis? Is it lichen planus? Is it parasitic? Is it caused by the use of some particular soap? Or is it like the wind, "We can see the results thereof but we cannot tell from whence it cometh nor whither it goeth."

As to treatment, cathartics, quinine, calcium sulphide and the digestants are used by some, and some physicians use no internal medicine whatever. Locally the soap and water bath followed by alcohol, eczema lotions, bichloride solution, boric acid solution and carbolic solution all seem to relieve the itching more or less, with perhaps some modification of the

lesion; but after trying them all, we have adopted the treatment of Dr. Coquilette of Byron, viz. A good scrub with hot water and soap, rinse with plain water. Apply alcohol, let dry, then stand by a hot stove and apply to the entire surface sulphur ointment to which 10 to 20 grains of carbolic acid, for each ounce of ointment, has been added, rubbing it in until it has entirely disappeared. Apply the ointment once or twice daily, and we have gotten the best of results. And finally whether the tongue is coated or clean, the breath foul or sweet, male or female, young or old, always clean them out and your local remedies will work better.

CALHOUN COUNTY MEDICAL SOCIETY.

The Calhoun County Medical Society held its regular meeting in Hardin, on June 19, 1904. Six members being present. Dr. W. A. Skul, subject for discussion was **Puerperal Hemorrhage;** Dr. S. Flatt, subject, **Puerperal Eclampsia;** Dr. I. S. Barry, subject, **Phantom Pregnancy.** A general discussion followed.

Dr. I. S. Barry was elected president of the Society. Dr. Louis Faihs was received as a member of the Society.

By motion Society agreed to have a meeting and give their annual dinner on Sept. 19, 1904.

T. O. Hardesty, Official Reporter.

DECATUR MEDICAL SOCIETY.

The Decatur Medical Society held its regular monthly meeting, June 28, 1904, in the rooms of the Decatur club.

The meeting was interesting and the attendance good. Arrangements were made at this meeting whereby the society meets permanently in these rooms by paying a small rental fee to the Decatur club.

Dr. William H. Bell read the paper of the evening on "Dislocated Kidney." Much of the paper was given to the normal anatomical relations and to differential diagnosis of loose kidneys. The discussion worked up the idea that the majority of women have a loose kidney; that many of these kidneys create no symptoms unless the woman knows she has it; that the symptoms are sometimes relieved by a properly fitting abdominal pad and support, but the promise of permanent results is in fixation only, in cases not showing too much enteroptosis.

Dr. W. P. Davidson of Sullivan showed two patients. One a girl aged 12, ailing since December, 1903, with some weakness and loss of flesh. He saw her a few months ago when he found left pleural effusion. Aspiration showed a blood-stained fluid. She has required aspiration about once a week because of dysponea and excessive accumulation of fluid. There is no fever except when chest gets full of fluid.

The child looks fairly well but thin. There was no tubercular history but the opinion generally was that this is a tubercular pleurisy.

The other case was a brother of this girl, but younger, showing an empyema of the left side accompanied by some fever but not much failure in general health. He had aspirated once but the cavity is probably refilling.

Drs. Jones and Cass Chenoweth related the case of a woman past 70 having spells lasting several minutes at a time and several in a night of complete left sided hemiplegia. In the intervals she would be free from this symptom. This continued more or less for over twenty-four hours. A fatal issue was rather expected but meantime salines were given and the bowels freely moved with benefit.

The instructive feature of the case is that after the physic acted and a day or more after food had been taken this patient vomited an enormous quantity of cabbage, meat and other similar food and has been perfectly well every hour since.

Dr. Cecil Jack gave a very entertaining talk of his trip to the meeting of the American Medical Association and of his visits to eastern clinics.

W. C. Bowers, Secretary.

Pan-American Congress Meets in Panama, Dec. 1904.

New York, June 9, 1904.

Fourth Pan-American Medical Congress. Office of the Secretary of the International Executive Committee, 75 West 55th st.

The Pan-American Congress meets every three years. It was started by Dr. William Pepper of Philadelphia, Dr. C. A. L. Reed of Cincinnati, Dr. Albert Vander Veer of Albany, and Dr. H. L. E. Johnson of Washington. The first meeting was held in Washington in September 1893, the second in Mexico in 1896, the third was to have been held in Venezuela in 1899, but was given up on account of the war in that country. The place of meeting was changed to Cuba, but had to be postponed until 1901 on account of the fever there.

These meetings have always been well attended and it is thought that Panama will be an interesting place for the convention.

Further particulars will be sent out from time to time to the Journal, together with notifications of the different officers appointed to represent this and other countries.

Wanted a physician. One who can step into a good well built up practice which has been a doctors office for the past 10 years with good success. Good reason given for vacant office. Rent reasonable. It will pay you to address. Chas. Price, Jacksonville, Ill.

The Illinois Medical Journal.

Special Section Containing Official Reports of the Chicago (Cook County) Medical Society and its Branches.

OFFICERS:

R. B. PREBLE, 103 State Street..... ..... President
FRANK X. WALLS, 4307 Ellis Avenue.....Secretary
A. E. HALSTEAD, 2937 Indiana Avenue..... .....Treasurer
W. A. EVANS, 103 State Street ..... Chairman Medicolegal Committee
WM. HARSHA, 103 State Street .....Chairman Membership Committee

JULY, 1904.

A regular meeting was held Wednesday evening, May 25th. President Preble in the chair. The program embraced a symposium on Hernia.

The Problem of a Flap Method in Herniotomy; Imbrication a Complete Solution.

By E. Wyllys Andrews, M. D., Chicago.

Professor of Surgery, N. W. University Medical School; Surgeon to Mercy and Michael Reese Hospitals.

I choose this title to fix attention at once on the plastic flap as the one thing needed to perfect the surgery of hernia. I will try to show that a dozen or more experienced operators have invented and tested as many ingenious methods of transplanting flaps to strengthen the canal walls, and that my method is the simplest, easiest and strongest of them all.

But why introduce flaps at all? Why not merely close the sides of the opening together? The answer is brief, that we are dealing with defective anatomy. Whether we believe the cause to be congenital or from laxity and atrophy of fibers, the fact is that these are often deficient in quantity and not simply torn or pushed aside by the protrusion. We therefore need to add to and thicken them by incorporating some new tissue at this weak point.

It will be admitted at once that small hernias are easily cured by simple stitching together. Removing the sac alone would often allow the denuded muscle to fall together and unite, especially if the ring be small and some of its margins be included in the purse-string closure of the sac. The O'Hara operation deals only with the sac, and the Kocher operation does little more. Even the Macewen method of closing the walls is inefficient as a plastic operation, yet all these operations cure simple small hernias fairly well.

As surely as you do many herniotomies, you will come upon cases where these older methods, and even the Bassini operation, are difficult to execute. The real test of a method is its ability to handle the large hernias and rings. We have cases in our series operated on without any change in technique in which the rings were large enough to admit the whole hand. As the method is as quick as any other, and is many times stronger, we deem it none too good for even the small hernias.

The moment one of these large old rings is encountered, trouble begins, with any of the earlier methods. If the sac only has been tied off, a frail membrane is left unsupported across a large gap. If some so-called sewing of the pillars is attempted, or if Bassini's deep suture is employed, we find the structures usually sutured are practically absent. A hernial opening of large size becomes a true ring. It is circular, and has sharp fibrous edges. The larger it stretches, the more fibrous and thin it becomes, until it extends from Poupart's ligament to the rectus sheath, and has hardly any muscle border. It resembles in such cases a ventral or umbilical hernial ring, and presents many of the same problems. The closure of such openings is very difficult, surgically speaking, in accordance with the maxims of plastic surgery to obtain good nutrition and absence of tension. The thin fibrous edges (unless they are overlapped, which I will come to later) do not present enough surface to unite well. Their vascularity is slight, and great tension exists when the circular hole is converted into a straight line by stitching. I never see an operation done this way without wondering how it can ever be expected to unite.

I advocated early the imbrication of these layers in umbilical as well as ventral hernia. Wm. J. Mayo very kindly credits this step to me, but himself adds another and even more valuable feature to the technique in that he overlaps the edges in a transverse suture line, a thing I had not thought of and which has apparently proven extremely successful.

In inguinal hernias with large fibrous rings, if we use, say, the Bassini deep suture, or the Ferguson, we find that there is an absence of muscle to sew to. What we really bring together in such large rings is often only the rectus muscle on one side and Poupart's ligament on the other.

The result is that the margins of the ring do not come together easily; Poupart's ligament is dragged up, and the rectus edge down, until these non-vascular structures seem in the greatest danger of non-union, or if they do unite,

to be torn apart rapidly on subsequent movements of the thigh and trunk. Here we have the principles of good nutrition and no tension again violated. As surely as an operator does a number of herniotomies, he will come upon cases of this sort.

Now, let us see what methods have been advised to meet this need. If I should give a list of the things tried, it would surprise you by its length, and the ingenuity displayed.

One of them is mine. I am going to tell later why I think it is best, but first let me give briefly a few specimens of what has been attempted in the way of introducing new material to fortify this weak spot.

First and most obvious, perhaps, the lower tissues from the thigh, have been tried. The fascia lata has been turned up in a trap-door flap to cover the ring. At least two muscles, the tensor vaginae femoris and the sartorius, have been cut loose by different operators and turned up to cover the ring.

Then, working from the upper side, the rectus sheath and muscle were early thought of. Woelfler employed the anterior rectus sheath inverted and sewed into the opening. Splitting the sheath so as to draw out and suture down the muscle was described by Halsted and is also recommended by Kelly. It is a great improvement on suturing the sheath and muscle, without opening, as it allows the softer muscle to be spread out more laterally. The invagination methods of Wood and Wutzer perhaps belong anatomically in the class of flap methods, although of a different date entirely. The scrotal skin in these methods was thrust into the canal and made to adhere there by stitches. Whether the sac inverted also or was only pushed aside cannot be determined.

Finally, heteroplastic plugging of the ring is another step in the search for something more efficient than merely sewing the margins of a hernial ring. Of these I will mention, as having been tried and advocated, sponge grafts, bone grafts of Wier, silver plates, and the silver wire mat of Phelps, who inserts many yards of wire into a single case. All of these I believe to be of little value. I perhaps ought to say also that I include in this last group the large cicatricial plug of the McBurney open method, now not advocated by him.

The mere catalogue of these ingenious contrivances shows an urgent need, namely, some new tissue to repair the weak canal. It would be useless to recount the endless variety of methods which did not do this. Thus the obsolete methods of Socin, Banks, Hahn, Barker, Bull, Czerny are no longer used at all, and those of Macewen, Kocher, O'Hara and Halstead very little at present.

Now, what is my operation? It is a short cut to success by simply making a sliding flap of the upper segment of external oblique, and drawing it down to Poupart's ligament. This of course doubles its thickness; gives broad surfaces for union, and covers an opening of any size with a stout fibrous layer. The overlapping can be done in front of the cord, behind the cord, or with the cord between. This makes at least six practicable ways of imbricating, every one of which I have tested. There is little to choose between them in point of strength, but some are more quickly executed, and I have used in most cases. In a considerable number of cases, the anterior closure, has been employed, where for any reason it was not easy to free the cord from its bed.

I have found a great deal of satisfaction in teaching and practicing the fascial sutures on the cloth models. And this will enforce the value of the principle better than anything I know, because the mechanics of cloth, so to say, demand it. The sail-maker overlaps and doubles his seams. Edge to edge union is never used when great strength is required. When the good mother puts a patch on Johnny's trousers, she sews it edge to edge, if for looks, but if she cares more for strength, she imbricates the patch well, and uses a double line of stitching.

In the fascia of the abdomen we are dealing with layers very like to cloth in texture, and smoothness. If we join fibrous layers of aponeurosis edge to edge, we might better have not cut them, since their union is very insecure, but if we overlap and double stitch them, we get broad surfaces of adhesion which cannot come apart, and we double the thickness.

If you want a union that will never fail, or stretch, overlap and double stitch the layers. You will double the thickness of the abdominal wall where it is most needed around the cord exit.

Now, I want to explain what I did not exactly realize myself until I had done hundreds of these operations, that we are really making here quite a perfect and typical flap transplantation every time we imbricate or shingle over these shelving layers of aponeurosis. It has become clearer to me the more I studied it that the method was a short cut to what very many workers had attempted by other means. It should supersede every known flap operation.

Large rings need flaps. Small ones possibly do not but as it takes no longer and adds much thickness and strength, I do it in every case. It must never be forgotten that in hernia we have faulty anatomy and the promise and potency of great defects. We are building for the future if we apply the strongest known method to every case treated by operation.

Dr. W. T. Eckley read a paper:

Surgical Anatomy of Hernia.

I wish to premise my brief remarks on the surgical anatomy of inguinal hernia by a reference to a general law governing anatomic variations. No two inguinal canals are exactly alike. The abdominal rings in different individuals vary. The relation of the archiform fibres to the crucial arch in different cases as recorded by different observers is most diverse. The cremarteric entity is called by one author muscle; by another fascia; in fact the terms are used interchangeably by good writers and good operators. My object in citing a universal law is to establish a philosophical working basis looking to the avoidance of useless confusion.

Anatomic variations are to be sought in all products of the Mullerian ducts and Wolf-

fian bodies; in all evaginated structures; in all structures which undergo rotation; specifically these variations of diverse nature are to be anticipated in the inguinal canal (a) because the same in its hernical aspect is evaginated from the abdominal cavity—a diverticulum thereof; (b) because the lower extremities including the pelvic girdle rotated inward in embryo.

The anatomical part of this symposium very naturally hinges on (a) the inguinal canal prior to the descent of the testicle—the pregubernacular canal; (b) the canal as modified by the descent of the testicle—the post-gubernacular canal, (c) the canal as the distorted product of a hernial protrusion.

The pre-gubernacular inguinal canal is a succession of potentially weak areas subsequently designated abdominal rings and subarcuate space. The canal at this period is occupied by undifferentiated connection tissue—the inguinal ligament being attached above to the asexual gland, below to the bottom of the scrotum. By development of unstriped muscular fibres in this inguinal ligament the gubernaculum testis is formed. Contraction of the gubernaculum reduces the testicle (a derivative of the asexual gland) to the cavity of the scrotum via the inguinal canal and thus is iniated the post-gubernacular canal—the inguinal canal of ahernial man.

The post-gubernacular canal differs from the pre-gubernacular (a) in the presence of the spermatic cord; (b) in a diverticular loss of certain elements constituting the internal, middle and external spermatic fasciae. These fasciae were derived by the descent of the testicle, from the transversalis farcia, arcute fibres of internal oblique and transvenalis muscles and aponeurosis of external oblique muscles, respectively. Collectively the spermatic fasciae constitute a parietal diverticulum and partake consequently of the nature of the abdominal walls. Departure of the vas deferens from the spermatic vessels just external to the deep epigastric artery, produces an opening in the transversalis fascia—the internal abdominal ring while that part of the same farcia carried down by the testicle constitutes the infundibuliform or internal spermatic fascia. The arch likewise contributes the cremasteric covering, while the external oblique surrenders certain fibres known as the intercolumnar or external spermatic fascia.

Summed up and analytically considered the post-gubernacular inguinal canal of the text-books consists of (a) an inner wall, formed by transversalis fascia, triangular ligament and conjoined tendon; (b) an outer wall, formed by the aponeurosis of the external oblique muscle covered by fascia and integument; (c) a roof, formed by the archiform fibres of the transversalis and internal oblique muscles; (d) a floor formed by the upper shelved part of the crural arch or Poupart's ligament; (e) an internal abdominal ring, in the transversalis fascia; (f) an external abdominal ring, near the pubic spine and in the aponeurosis of the external oblique muscle.

The inguinal canal incident to a hernial protrusion presents distortions of anatomical parts and departures from the post-gubernacular canal commensurate with the size of the hernia and the duration of the pathological condition. The rings are now actual ones; the subarcuate space is no longer a potentiality. The relative position of the rings to each other is altered to a remarkable degree, so that the internal one lies behind rather than lateral to the external one, explanation for which is evident, in view of the unyielding nature of the pubic bone. The deep epigastric artery is displaced mesially in oblique and laterally in direct inguinal hernia, and all that remains to tell the story of an inner wall is the conjoined tendon.

The muscular fibres of the internal oblique and transversalis in the region of the crural arch are disposed in two ways (a) some are inserted into the crest of the pubic bone as the conjoined tendon; (b) others are carried with the spermatic cord and testicle on which they appear in festoons of muscular fibres of such extreme delicacy as to be almost beyond the pale of the macroscopic. These are the cremasteric fibres. In some of the lower animals the crematerie musclar fibres are derived from and clearly tracable to both internal oblique and transversalis muscles. In man, however, they are derived from the internal oblique only, the transversalis being represented by a fascia only. The interchangeableness so frequently noticed in text books, of the terms cremasteric muscle and cremasteric fascia can thus be interpreted.

The attachment of the archiform fibres conforms to no known law regarding extent. In one case the outer ½ of Poupart's ligament may be involved attachmentally; in another case muscular fibres may be demonstrated the entire length of this structure. And why is this so? For reasons associated with the law of anatomical variation previously cited. In the embryo the upper extremities rotated outward with the establishment of the permanent clavicle; the lower extremities including the pelvic girdle rotated inward. If then we have deference for fundamental principles in anatomy, we must admit the utter futility of attempting to give definite involvement of Poupart's ligament by the muscular fibres of the internal obligue and transversalis muscles. The pelvic girdle with its attached soft structures is a product of rotation and amenable to a general law—a universal precedent.

One more thing I wish to say, and I hope that in the discussion this point will be referred to fully by the surgeons, and that is the distinction between the so-called direct and indirect or oblique inguinal hernia. From an anatomical standpoint, I want to say, in my opinion the man is yet to be born who can tell prior to operation when he is brought in contact with a large hernia, whether it is direct or indirect, according to the text-books. They tell us that an oblique hernia comes down externally to the deep epigastric artery, and that

a direct hernia comes down through Hesselbache's triangle internal to this artery.

Assuming that we have a direct hernia large enough to fill the subarcute space, what does it do with the epigastric artery? It pushes it outward. If it is an oblique hernia of the same size, it presses the artery inward. Now, how can you say whether it is direct or indirect, since in either case it occupies the same subarcuate space?

Dr. W. C. Abbott: I would like to present the medical side of the question or one essential phase of it. Physicians see 90 per cent of all the cases of hernia before they are seen by the surgeon; particularly is this true of cases of acute strangulation; and in view of this fact he should be well posted on how best to handle these cases to prevent change and destruction of tissue. When called to see the case we usually find a more or less educated patient surrounded by his family or friends all anxiously awaiting for the attention, bungling or otherwise, of the general practitioner.

The point I wish to make is that we should try to and be able to in every instance, through imitation of Nature's methods, get that gut back into the abdominal cavity with the least possible disturbance and within the minimum space of time, to the end that if the surgeon is subsequently called he will have a clean, non-irritated field in which to work.

We have at our command certain medicinal agents which will materially help in this; namely, hyoscyamine and glonoin, or nitroglycerine, with strychnine. Patients suffering from strangulated hernia are usually in more or less of a collapse with the oppression of circulation. If they are not in bed they should go immediately and the whole abdominal surface should be covered with a thick, soft, hot flannel or other compress and this covered with some heat-retaining material. This should not be disturbed throughout the treatment. First, give the patient glonoin to reestablish circulation and overcome the shock, then inject immediately a large dose (say 2 granules, Gr. 1/250 each) of hyoscyamine and watch the pupil for effect. Hyoscyamine acts like atropine, but has a greater effect upon the circular fibres of all the organs, especially the intestine, hence its adaptability in these cases.

If the pupils do not begin to dilate in ten minutes repeat the dose. This, however, is rarely necessary. As soon as the pupil begins to dilate, your syringe having been prepared while waiting, inject a large dose (say 1/30th of a grain) of strychnine and one-half of the above named quantity of hyoscyamine. The action of the hyoscyamine will be to increase and perpetuate the dilation while the strychnine will whip up the longitudinal fibres and produce a quick peristalsis.

With the dilation of the circular fibres as shown by the pupil the reflexes let up and produce cessation of spasm in the structures which surrounding the inner opening of the inguinal canal, as well as the entire canal itself, cause the constriction and quick peristalsis of the gut, aided if necessary, by gently intermittent but persuasive taxes with a hot hand gently inserting underneath the hot dressing, will in most instances, cause prompt, painless and complete reduction. It may at times be necessary to add to this the inhalation of chloroform to partial or complete anesthesia. As a rule morphine and opiates of all kinds should be avoided.

Dr. Fuller: I would like to ask Dr. Eckley a question with reference to the differential diagnosis between direct and indirect hernia. He described very clearly the similarity of the two forms of hernia, each filling alike, when large, Hesselbach's triangle; the only difference being the outward displacement of the deep epigastric artery in a direct hernia, and the inward displacement of that vessel in an indirect hernia.

The Doctor said that the man was not born who could tell the difference. I should like to ask him whether it is not possible, with a hernia of the size he mentioned, by invaginating the scrotum and passing the finger deeply through the hernial openings, to feel the pulsations of the deep epigastric artery, and so differentiate between, in most cases at least, the two forms of herniae.

Dr. W. T. Eckley, (closing the discussion:) Referring to the differential points between direct and indirect inguinal hernia, I endeavored to convey the idea that in my opinion the man was not yet born who can tell, prior to operation, whether he has to do with a direct or an indirect inguinal hernia, inasmuch as in either case the entire subarcuate space is filled up by the hernial mass. If Dr. Fuller can do what he says by detecting pulsation in the deep epigastric artery. I am very glad to stand corrected, because it offers us a solution of a difficult problem.

This has been an interesting meeting because we have, I believe, harmonized the Bassini, Ferguson and Andrews operations. In the Bassini operation the cord is removed from its natural anchorage, in the Ferguson it is permitted to remain and in the Andrews it is strengthened by plications. In each case the arched fibres of the transversalis and internal oblique muscles are brought down to Poupart's ligament, and what must necessarily occur? When the arch is brought down the fibres are incapacitated, so far as their future contractile use is concerned. Atrophy of the muscle follows and we have three things to deal with; one, a vestigial remnant of the internal oblique, one of the transversalis fascia, and these blending with the cord make a resistant mass, so that the result we obtain here with the Bassini Ferguson and Andrews operations I consider good and satisfactory.

I wish Dr. Eisendrath would add to his etiology of hernia the same developmentally defective mesodermic tissue that is causative in floating kidney. This may be attributed as a factor in both inguinal and femoral hernia.

A regular meeting was held Wednesday evening, April 27th. The subject for the even-

ing was **The Relations of Ophthalmology and Otology to General Medicine and Surgery.** Among the papers read was the following:

Neurologist or Opthalmologist?

By E. J. Gardner, A. B., M. D.,

Professor Ophthalmology, Chicago Eye, Ear, Nose and Throat College.

Of the many perplexing problems that fall to the lot of the general practitioner to solve, few are more difficult than those obscure cases of **so called neurasthenia** for which no well defined cause can be ascertained, and which apparently defy every form of treatment. The main symptoms may be general inability for all kinds of exertion—physical and mental, constant or recurring headaches, distressing feelings of exhaustion at the base of the brain, at times extending downward to the lower extremities; choreic twitchings, insomnia, morbid irritability, melancholy, hysterical manifestations, one or more forms of morbid fears. The picture is familiar. The blood has been examined; if not normal has been corrected. The urine has, perchance, shown nothing abnormal, digestion has been improved and bowels regulated if not normal. The reproductive organs have come in for their share of examination and treatment. Tonics, sedatives, alterants, answers—sight is excellent, using the eyes does exercise, fresh air, rest cure, have been tried. Inquiry as to the eyes has elicited negative not particularly fatigue the patient. In fact, the patient will often assure the physician that the eyes are unusually strong. But still the morbid state persists. At this juncture the practitioner turns to the specialist for help in his perplexity—who shall it be, Neurologist or Opthalmologist? The writer shall in this paper confine himself to his specialty, and endeavor to give one or two hints, without claiming any originality for them, that may be useful in some cases. No reference shall be here made to pain-producing cases of eye disease, presenting perfectly clear pathological lesions, conjunctivitis, kiratitis, iritis, choroiditis, etc., or to affections of the eyes produced by, and dependent upon, morbid conditions of the general system—syphilis, rheumatism, kidney disease, or organic affections of the brain. If the derangement is due to eye strain there will be found a well defined cause for it in the eyes or the ocular muscles. There will be found either an anomaly of refraction, or an anomaly in the muscle balance. It matters little what form of anomaly this may be or how great the degree, for the purpose of making a diagnosis by exclusion, the main object is to ascertain whether an anomaly exists. The importance of the anomaly is entirely a different matter, and it is for the oculist to determine the extent and the importance—not such an easy task at times. It is of course a very easy matter to refer the patient to a competent oculist to make the examination, and the oculist certainly will raise no objection to such a procedure; but the patient sometimes does raise an objection to being examined at so much per by different specialists for the sake of finding out what the matter is, and he entertains the opinion that his Doctor should decide beforehand the person to whom he should be sent for relief of his trouble. We shall not here discuss how much justice there is in this claim. But we will ask the rather pertinent question, is the general practitioner competent to decide the matter? I claim that he is, and if he is not he may become so with very little trouble. It is claimed that opthalmology is the most exclusive of the specialties. It is, and profound are its mysteries. The average student of medicine gets through this department of his work with just enough to pass, and then shudders at the thought of what might have been. In practice, unless hard pushed, he will have none of it, and he is right. But after all it is the details that are difficult, not the fundamental propositions. The writer is a firm believer in specialties, and he would not yield an inch of his territory to the general practitioner, or would he encroach an inch into the general practitioner's field, but it is not our object to claim, that the practitioner should treat disease of the eye, but that in certain cases he should be able to recognize certain anomalies of these organs that may be the cause of the disturbances for which his patient seeks relief. It may be stated that with few exceptions all symptoms producing disorders of the visual organs (pathological conditions included, but not here referred to) recognize some more or less well defined anomaly in the formation of the eye, or in the action of its muscles. And the question before us may be thus stated: Is there a simple method by which these anomalies may be detected by one who is not an expert in opthalmological technique? The opthalmoscope in the hands of any one moderately expert is of great service—first, because by its aid he will be able to ascertain whether any pathology exists, and secondly, because he can detect errors of refraction. The ability to measure refraction with the opthalmoscope is not a very common accomplishment, and the detection of small errors, half dioptric is most difficult ever for experts and these slight errors, especially when of the astigmatic form, frequently cause most distressing asthenopic symptoms. For the second purpose therefore the practitioner can not rely upon this instrument. The test card and box of lenses remain. The objection to this procedure is that it is complicated and difficult, and the outfit is expensive. This objection is valied when the purpose is to refract a case, but when the object is simply to ascertain whether there is an error of refraction or not, or whether there is muscle balance or inbalance, the matter is comparatively simple. The initial step in testing a case is done with four lenses and a Maddox rod, and with this small outfit and a test card the practitioner may determine what for him is the main object—whether his patient's eyes are normal. The outfit for such a test is very simple and inexpensive. In place of the large test case, a small one containing five pieces is all that is required, and a test card, either of the ordinary size or one having

letters to be read at thirty, twenty, and fifteen feet. (F. A. Hardy & Co., of this City make a test case of this description.)

For the muscle test, a lighted candle, or ordinary gas-light turned down to make a small flame, is all that is necessary. The technique is as follows: Placing the patient with both eyes open, at twenty feet from the light, and in such a position that the eyes will be on a level with it, the Maddox rod is placed before one eye, first with the axis of the rod perpendicular. The patient will then see with this eye along line of dispersion colors—running horizontally—and with the other eye, the light will be seen. If the line of dispersion colors runs through the light, there is no manifest inbalance of the superior and inferior recti-muscles of the two eyes. If it does not run through, manifest inbalance exists, hyperphoria. 2. Placing the Maddox rod so that the axis runs horizontally, a line of dispersion colors will be seen extending perpendicularly. If the line runs through the light there is lateral balance, externi and interni. If it does not, there is lateral inbalance. If the dispersion line is deviated to the side of the eye over which the Maddox rod is placed, there is inturning of the eyes—esophoria. If the dispersion line is deviated to opposite side of the light, there is out-turning, exorphoria. Example: If the Maddox rod is placed over the right eye, and the line of dispersion is seen to the right of the light there is esophoria. If to the left of the light there is exophoria. Deviations of this nature are fruitful sources of nervous disturbances; but it should be borne in mind that they very frequently are caused by errors of refraction. The second test is with the card. With good illumination, normal eyes should easily read the line marked, 20—at 20; that marked 15—at fifteen feet. This test should always be made for each eye separately. Inability to read them signifies that vision is not normal. The test may here cease. If the line is readily deciphered, there is normal vision. This excludes any perceptible amount of myopia, but leaves a possibility of hypermetropia and slight degrees of astigmatism. Place before the eye the lens marked plus 0:50, spherical. If it blurs the line, there is no manifest hyperopia. If no change is noticed, or there is improvement, hyperopia exists. If plus 0:50 spherical blurs the line, place before the eye plus 0;50 cylindrical, with the axis perpendicular. If it clears the line there is astigmatism. If this blurs, try the horizontally, then obliquely midway between the two. If improvement is noted there is hyperopic astigmatism. If in one direction it blurs and in another no change is noted, there is astigmatism. If nothing satisfactory has been accomplished with these lenses, try—0.50 cylindrical. Place it before the eye with the axis horizontal, then perpendicular, then in the oblique position. If in any of these positions there is improvement in vision, there is manifest myopic astigmatism. The word manifest is used in all these cases advisedly because the manifest error is not necessarily the true error; but for the purpose in hand, the question whether an error exists or not, is solved. I have purposely left the fourth glass—0.50 spherine in the case for the last, because its findings are frequently untrustworthy. The elements that contribute to make this test uncertain need not here be discussed, but the fact should be borne in mind. If the letters are rather indistinct, and this lens clears them up, there is manifest myopia, but we should not lose sight of the fact that many young emmetropes and hypermetropes accept a negative glass. A red glass has been added to the case, I confess more for the sake of symmetry than for any other reason. It is used for detecting latent diplopia—double vision. In some cases, when ordinarily one object is seen with both eyes, when tested with a red glass over one eye, there will be seen double images significance of this phenomenon, it is not our purpose to discuss—suffice it to state that the Maddox rod will, for the object in view, answer the purpose of detecting muscle anomalies.

Resuming: Test the case for muscle balance. If there is inbalance, you have found a datum. Test with card: 1st. If the patient can not readily decipher 20/20 vision is not normal. You need not pursue the investigation any further. 2. If the patient can read 20/20 use the lenses as detailed above. If he accepts any of them, there is an anomaly, and bear in mind that small anomalies frequently give rise to large disturbances. Indeed, at times it would seem that they are in inverse proportion one to the other. By the use of these simple tests, you will be enabled either to eliminate the eyes from the problem, or you will be furnished with certain definite data concerning them. In both cases, the test will assist you to determine whether it shall be Neurologist or Opthalmologist.

36 Washington St., Chicago.

A regular meeting was held Wednesday evening, June 1st. President R. B. Preble in the chair. .The following paper was read and discussed:

Before reading his paper Dr. Derdiger presented a case of **Neurasthenia.**

A Case of Neurasthenia.

Dr. Aria Louis Derdiger: The case which I wish to present to you to-night is one of classical neurasthenia, and it has been so diagnosed by some of our best medical men in Chicago and treated for that disease with more or less benefit.

Six weeks ago the patient, age 52 years, the gentleman who is before you, consulted me about his eyes, wishing to have glasses prescribed for presbyopia. History of nervous symptoms for the past ten years. Upon examining the case I found considerable spasm of accomodation. The muscle test showed 6° of esophoria, with 1° of left hyperhoria. Adduction 20°, abduction 5°, sursumduction 1°. These tests were repeated several times during the first week, and the same results were obtained, with the addition of compound hypermetropia—astigmatism of slight degree. The

following week I found 2° more of esophoria, with one more degree of hyperhoria. The astigmatism was the same. The patient complained of having a feeling as though the eyes were being drawn too close together, and while reading he would lose the lines, so to speak, and would cease reading or writing. That occurred frequently, especially during his editorial work on the Western Druggist, which position, owing to his condition, he was obliged to relinquish. I concluded not to prescribe glasses nor to use any mydriatic, owing to the patient's age, but to continue examining the muscles and ascertain, if possible, the full amount of heterophoria. Three weeks from the time of the first examination we had 13° of esophoria and 3° of left hyerphoria; the astigmatism had disappeared. The patient's eyes exhibited: Right eye: Plus .75 D., of a simple hyperopia. Left eye: Plus .50 simple hyperopia.

Vision with these lenses was normal. The adduction power was 20°; the abduction, 5°. I prescribed spherical lenses, to be worn constantly, adding plus 2.50 spheres to those for reading purposes, together with rhythmic exercises with 4° prism, base in, to be used from once to three times a day, about five minutes at a time, stopping short of fatigue. That treatment has been continued for about two weeks, and during the last week the tests made daily at the office showed about 1° of left hyerphoria, and no esophoria. The patient is now able to read without losing the lines. The feeling of the eyes being drawn together, as if the patient were cross-eyed, has disappeared, and the neuralgic attacks, which I omitted to mention at the beginning, to which the patient has been subjected for some years past, have not occurred as frequently. If I remember correctly, during the six weeks the patient has had one or two attacks.

The purpose of showing this case is that cases of asthenopia, masked under the condition just described, esophoria and hyerphoria, are frequently referred to the neurologist, as has been the case with this patient, for treatment along that line, and very little attention is paid to the condition that really causes the nervous trouble. In this case, however, the patient had consulted an oculist some time ago, but the muscular trouble was not looked into, the patient receiving glasses for the astigmatism and presbyopia. I simply wish to state that after continuing these rhythmic exercises with prisms and the wearing of proper glasses, I hope to be able to ameliorate this functional nervous trouble. I do not wish to be understood as saying that the case is presented here as entirely cured, for that is not so, but I wish to say that the patient has derived a great deal of benefit from the treatment, and that his condition is decidedly improved. The spasm of accomodation having disappeared, we now will have a true condition of muscular anomaly, so that we may hope for permanent relief.

In the paper I am to read at this meeting, I shall cite cases that I have had under my observation for from one to two or more years, having had the opportunity to watch for a recurrence, and you will see what is possible to do along this line.

Nervous Diseases and Eye Strain.

By Aria Louis Derdiger, M. D.,
Late Instructor in Bacteriology at the College of Medicine, University of Illinois

In the following paper I wish to call attention to two of the numerous cases that have come under my personal observation, illustrating a large class of nervous diseases due to errors of refraction or weak or illy balanced muscles. Such cases, diagnosed by the general practitioner, are frequently referred to the neurologist as neurasthenia, migraine, chorea (St. Vitus Dance), hypochondriasis, etc., for treatment.

It has been the experience of the writer, in the careful study of the cases which have been examined and treated for the removal of ocular anomalies, that there is a direct relation between these ocular difficulties and the diseases in question.

These cases are chosen as being typical in all respects, representing the class of chronic cases generally supposed to have their origin in the nervous centers, or to be due to hereditary neuroses, and with unfavorable prognosis as to a cure.

When we consider the etiology of migraine and chorea, we shall readily see the plausibility of the direct connection of the eyes and the diseases in question, by bearing in mind the statement of Gowers and other authorities, that the "maximum period of migraine are late in childhood, puberty and early adult life."

One-third of the cases begin between 5 and 10, about two-fifths between 10 and 20, and most of the others between 20 and 30, half of the cases being hereditary.

As to treatment, Dr. Gowers says: "If any error in mode of life or defect in general health can be traced, the removal of these is the first and most essential step in treatment." We find a similar state in the etiology and treatment of chorea. It occurs most, frequently between the ages of 5 and 10. Prominent factors are heredity, over-work at school, excitement, bad hygiene, etc.

The eye tests made by the writer of several thousand pupils at the State Normal School, at Oshkosh, Wis., extending over a period of 5 years, are in accord with the statistics of other schools, that the greatest percentage of eye defects are found among pupils of school age. We know from experience that after the removal of a child from school, the chorea and migraine cease in most instances, but we also find by careful study of these cases, that while these diseases are, as a rule, self-limited, there is apt to be a return of the trouble upon close application of the eyes. Sometimes the condition manifests itself in a different form of neurosis later in life.

Experience is not wanting to confirm this hypothesis, as will be seen by the perusal of the cases in hand, which are but a few of the many which the writer has successfully treated.

Case. 1. Mrs S. F. W., aged 25, married. First seen April 9, 1895. When about 10 years of age began to have chorea. The cause was supposed to be due to over work in school. The disease has run an almost uniform course during fifteen years.

She now has the characteristic jerkings of the face, legs and arms. Twitching of the abdominal muscles and eye-lids are among the most constant and unpleasant of the choreic disturbances. She appears languid and says that she is always tired. She is thin in flesh, sleeps irregularly, has constant headache and for fifteen years has experienced troublesome symptoms of asthenopia. Complains of pain in the eyes, nervousness and constant headache. Her circumstances have been such as to permit her to employ whatever means offered a reasonable hope of relief, but every attempt has met with failure.

I find adduction 10 degrees, abduction 10 degrees, sursumduction 1 degree, insufficiency of internal recti or Exophoria 8 degrees, and L. Hyperphoria 1 degree.

Before atropin:

Vision—right and left eye 30/40. Patient saw double. With 8° prism, base in, vision was single.

After using atropin for three days:

O. D. V=30/80 with plus 50—plus 25 cyl. ax 90 vision=30/35.

O. S. V=30°80 with plus 75—plus 25 cyl. ax 60 vision=30/30.

Ordered: The above glasses less plus 25 D. sphere and rythmic exercises for the Exophoria with 4° prism, base out, left eye, and 1° prism down R. E. for Hyperphoria for two to ten minutes two to four times a day, using only one prism at a time for Hyperphoria or Exophoria.

Exercises were continued daily up to April 27, when, upon examination the patient, while seeing double, 4° prism with base in would fuse images. Repeated examinations gave the same result, viz. 4° Exopharia and 1° left Hyperphoria, with the correcting glasses combined with 4° prism, base in, before the right eye and 1° prism, base down, before the left eye, vision was normal.

Adduction was 30°, abduction 8° and sursumduction 2°.

This correction was ordered to be worn constantly and exercises continued. One month later we found the patient free from choreic symptoms, she had no longer suffered from headache. The patient was seen once a month for one year, still gaining in flesh and spirits. She seemed in perfect health two years later, had no choreic symptoms, headache or pain.

The same correcting glasses were worn with comfort and the exercises ordered to be discontinued.

Case No. 2. Migraine or sick headache and bordering on hypochondriasis.

The following transcript of a case, the hypochondriac's own description of her symptoms, is characteristic.

"I have been a sufferer for years; in one day I have about fifty diseases, my head and stomach especially. I cannot eat. If I eat the lightest food then I have indigestion, so I don't eat at all. I can't sleep, and if I do sleep for a few minutes I have such horrible dreams; I dream I am here, there and everywhere. If I sleep a little I am always moaning, for pains are all over my body. First my back, I can't stoop, then my chest, all down my sides, my shoulders, my legs, then the pain goes towards my stomach and head, and the pain stops there. I have been to vegetarians and they told me not to eat meat, so I have not eaten meat for years. I have been to Christian Scientists and they prayed with me aloud and in silence, and kept it up for a long time, until I lost courage. I have taken all sorts of massage and tried all sorts of remedies for years. I see there is no improvement, but the reverse. I can't even wash a cup.

"I have taken treatment from Mental Scientists and electric doctors, and all kinds of doctors, for a long time, but the pain became so severe that I can't stand on my feet but a few minutes before everything turns black before me. I get dizzy, buzzing in my ears, my sight grows dim, the heart palpitates, my whole body quivers, a cold sweat breaks out all over me, I feel deathly sick to my stomach, the bowels get loose, and the pain becomes so severe in my head and stomach that I am obliged to fall on the bed, sometimes I stay in bed a few hours, other times two or three days. I always thought that I had a complaint in my heart, but the physicians have examined me in private and at the hospital, and said my heart was well. Even when I wash myself the pain I have is terrible; sometimes I feel so heavy that I can't move myself, and I also have a burning in my body. This burning kills me altogether, for it leaves me very weak. I have been taking music lessons, but after half an hour's practice I have such pains that even the nails of my fingers ache. After singing awhile the letters become blurred, my voice becomes husky, and the eyelids twitch so that I tremble all over."

This patient was brought to me by her parents, who also presented a letter from Dr. D. B. Wyatt, of Fond du Lac, Wis. According to the history given by the patient and her parents at their first visit, July, 1895, Miss M. K. D., age 24, had been teaching school until eighteen months ago, when she suddenly experienced severe pain at the occiput, became nauseated, and was obliged to leave school. From that time on she was ill most of the time, and under the care of her brother, who is a physician.

The patient is thin in flesh, extremely pale, the lips are colorless, and the ocular conjunctiva pearly white. She has had migraine once or twice a week during the past five years. The pain is always unilateral, attacking one or the other eye, and supraorbital region, and extending downward along the course of the branches of the fifth nerve. With each attack she is forced to retire to bed, and intense nausea and vomiting is always present. A night's sleep often brings relief.

In this case there was found to exist before atropin:

Right and left eye V=20/20 with minus 50 cyl.

X—180 V=20/20.

The muscle test with prisms showed 4° of Exophoria, or a tending of the visual lines outward. Homonymous tendency. Insufficiency of the internal recti. Adduction 20°. Abduction 8°. Right and left sursumduction 2°.

Atropin was used for three days with the following results: The field of vision was contracted in all directions. V=20/60. The letters of the trial card appearing and disappearing. The opthalmoscope showed the disc pale, the arteries rather small, the red cylinder of the larger arteries being bordered with white lines, representing the unusually conspicuous sheaths of these vessels. The veins were rather large. The general background lighted up well, but was of paler red than usual. There was found to exist:

Right eye V=20/60 with plus 1.25 plus 50 cyl. ax 90 V=20/20 or normal.

Left eye V=20/60 with plus 0.50 plus 50 cyl. ax 90 V=20/20, or normal with insufficiency of the internal rectimuscles of 4°. Glasses for correcting the refractive error, combined with 4° prisms, base in, to be worn constantly, were prescribed. Gymnastic exercises were ordered, with 4° to 10° prisms, base out, were prescribed for five to ten minutes each day for six months.

No physical cause for these frequent and torturing nervous disturbances was found elsewhere than in the eyes and their appendages. Her father and mother were neurotic subjects. She was seen from time to time, and careful observations have been made of the ocular conditions, as well as of her general health. There continued a steady improvement, the color returned to her face, she gained in weight and strength, and although one year had passed she did not have an attack of migraine or a recurrence of the other symptoms.

July 3, 1897, a slight return of headache caused the patient to direct renewed attention to the eyes, when it was found necessary to use atropin for three days, which gave the following results:

O. D. V=20/30 with plus 50 plus 1.25 cyl. ax 105 V=20/20.

O. S. V=20/50 with plus 50 plus 1.00 cyl. ax 90 V=20/20.

The muscle test showed Orthophoria or a tending of the visual lines in parallelism, no Exophoria being present. Glasses for correcting the refractive error were prescribed without prisms to be worn constantly. Since that time she has continued to be well.

Conclusion. After comparison of the family history and physical conditions in several hundred cases of eye defects treated, extending over a period of fourteen years, many of whom had previously been under some form of treatment for neuroses, the writer ventures the following proposition, which is in accord, in the main, with the teachings of Dr. Stevens and other investigators in this line of work:

First. Hereditary neuroses, such as chorea, migraine, neurasthenia, epilepsy, and insanity are not always transmitted from parent to child directly.

Second. Such neuroses are the manifestations of transmitted physical peculiarities, which interfere with the normal functions, thereby tending to develop neuroses or predisposing to them.

Third. By carefully correcting errors of refraction and existing muscular anomalies, by prescribing the wearing of prisms, and regulated muscular exercises, these exercises being continued for months in connection with proper attention to hygiene, the writer has been able by persistent application of the wax taper and prism method, to develop the weak muscles, overcome the eye-strain, and practically relieve the functional nervous diseases, without finding it necessary to resort to tenotomy.

Discussion on the Paper of Dr. Derdiger.

Dr. Julius Grinker: The paper that has just been read has certainly been well worked out, and the essayist ought to be given a great deal of credit for curing a case of chorea and a case of so-called migraine with hypochondriasis, by correcting eye defects.

Of the several hundred other cases of functional neuroses which the essayist has mentioned, I am not so sure whether there were any cures performed by correcting eye strain. Every neurologist knows that in every case of nervous disease the eyes ought to be examined for various disturbances; in fact, almost every nervous case is examined for fundus findings, for ocular palsies, etc., but of the many cases of genuine neurasthenia, migraine and chorea that I have seen, and others with more experience, I have not heard of a single case that was cured by an opthalmic surgeon. When there is a nervous condition, such as headache after reading, vertigo and other indefinite nervous symptoms due to eye defects, in other words, when there are symptoms produced by asthenopia, they are readily removed in the way indicated by the essayist. But migraine is not produced by eye strain; on the contrary, it seems to be the disease *par excellence* which is transmitted by heredity, either directly or indirectly. The mother has probably had migraine or has been hysterical or epileptic. Migraine, which gives us such a typical characteristic picture, with its periodic recurrences, with its onset at or near puberty; its peculiar symptomatology, such as intense pain either on one side or involving the entire head; the tendency to avoid light and noises; the nausea and vomiting which either accompany or wind up the attack, is still far from being recognized, and still further from being cured. Sometimes we flatter ourselves that we can lengthen the intervals between the attacks by the administration of cannabis indica, but how the mere fitting of glasses or the advancement of a muscle can cure a genuine case of migraine, when the most powerful remedies fail, I am unable to comprehend. It is certain that there are so-called ocular headaches that may greatly resemble migraine. If the case

which the essayist cured was migraine, he certainly has performed a marvellous feat that few others can duplicate. We are in the habit of referring cases of migraine and allied disorders to the oculists, but we always get them back not one *iota better*.

I know of the work of Dr. Stevens and Dr. Ranney, of New York, who has written a most readable book on the anatomy and physiology of the nervous system. Among the many things he claims to cure by correction of eye-fatigue, etc., he includes epilepsy and makes the most exorbitant claims for personal success. However, neurologists and opthalmologists of note have failed to duplicate his results.

So far as the cure of chorea is concerned, which the essayist, by the way, pleases to call a hereditary neurosis, I doubt very much whether he has ever cured a case of Sydenham's chorea. There is a form of chorea, called hereditary, or Huntington's chorea, which I am sure, the doctor can not have in mind, as not even the deity can cure that disease. Chorea, as is well known, is an infectious disease bearing some close relation to rheumatism and occurs usually in children, regardless of heredity. It is a disease that is self-limited; it may last fifteen weeks, but never fifteen years. I cannot get myself to believe that a case of chorea has lasted fifteen years and still less that is was eventually cured by glasses. There are cases which so resemble chorea, that they are often taken for that disease by those who do not see much chorea. Children often develop a peculiar twitching of the eyelids owing to some uncorrected error of refraction. The twitchings are choreic in character, but are not identical with those seen in chorea minor. The best remedy at our command in the treatment of the last-mentioned disease is still Fowler's solution in ascending doses. It is best to begin with 5 or 6 drops well diluted in water, to be taken after meals, and to increase **one** drop daily (**not** one drop three times daily.)

As regards the essayist's case of hypochondriasis, the enumeration of the symptoms as given by his patient, proves it to be a typical, uncomplicated, classical case of old-fashioned neurasthenia. That suggestion, direct and indirect, has celebrated its greatest triumphs among the neurotics, is so well established a fact that it only needs to be mentioned. It is not always easy to find out what agent will produce the desired effect in the patient. Sometimes it is medicine, sometimes electricity; osteopathy, or Christian Science, or direct hypnotism. It is possible for eye-glasses to produce salutary effects upon a patient's mental vision, as he is compelled to look upon the world through the medium of optimistic (or rather optician's) glasses, instead of looking through his own pessimistic eyes.

Dr. Derdiger (closing the discussion): I have not much to say, only to answer Dr. Grinker, who has commented on my paper. I shall be very much pleased to show him the records I have of these cases. I have taken pains to mention the doctor's name who referred the case to me, and the young lady's brother is also a physician, and a diagnosis was made of migraine and hypochondriasis. If my memory serves me right, there was also a consultation had with a neurologist as to its being migraine.

All forms of treatment, as was described in my paper, were resorted to until the patient came under my observation. I did not claim in my paper that I cured the patient merely by putting a pair of glasses on. First, I endeavored to remove the spasm of accomodation with a mydriatic, then corrected the defect of vision, then the anomalous condition of the muscles with prisms, the Exophoria and Hypeyhoria after which rythmic exercises were continued for a long time. If there are any other practitioners here who doubt that these cases can be cured, have been cured, and are cured in the manner I have described, all they have to do is to step into my office and I shall gladly go over my record books with them, so that they can see for themselves. Furthermore, if they will take the time to read Dr. George Stevens' book on nervous functional diseases, they will find that he has cured a number of cases of chorea, epilepsy and migraine by the correction of the eye defects. Dr. Stevens believes in tentonomy. He seems to favor that line of treatment more than the treatment described by me.

NORTH SHORE BRANCH.

Officers.

Chairman..G. W. Green, 1296 E. Ravenswood Park
Vice Chairman.....L. L. Gregory, 1377 N. Clark st
Secretary....Geo. Edwin Baxter, 1916 Evanston ave
Councilor.....J. P. Houston, 1180 Sheffield ave
Alternate Councilor.....A. Young, 550 Wilson ave

Committeemen:

South Subdistrict.....H. B. Williams, 100 State st
West Subdistrict.....R. E. Green, 70 State st
North Subdistrict...Bertha E. Bush, 808 Morse ave
East Subdistrict.....J. A. Patton, 100 State st

The North Shore Branch held its regular annual meeting, Tuesday evening, June 14, 1904, in the Ravenswood Club House, corner Wilson and Ashland aves. The following program was given:

Some Points in the Medical Treatment of Adenoids and Tonsils, E. F. Snydacker.

Cholelithiasis, report of two cases with Presentation of Specimens, M. E. Block.

Papers were discussed by Drs. Green, Young, Gregory, Abbott, Burr, Syndacker and Block.

The following officers were elected for the coming year: Chairman, G. W. Green; Vice-Chairman, L. L. Gregory; Secretary, Geo. Edwin Baxter; Councilor, J. P. Houston. Alternate Councilor, A. Young. Committeemen: South Sub-district, H. B. Williams, West Sub-district, R. E. Green, North Sub-district, Bertha E. Bush, East Sub-district, J. A. Patton.

The annual report of the Secretary was read and approved which showed the Branch to be in a very active and flourishing condition. Announcement was made that members who may desire to present papers at the meetings next year shall notify the Secretary before Oct. in order that the program for the year may be made up.

George Edwin Baxter, Sec'y.

NORTH SHORE MEDICAL SOCIETY.

Report of two cases of **Cholelithiasis** with demonstration of specimens.

M. E. Block: Case No. 1, is of interest on account of the difficulty of diagnosis. Case No. 2, on account of long standing, the amount of calculi removed and the success of the cholecystectomy.

J. W. aged 42; family history, negative. Present history, has been in poor health for ten years and more or less under medical attention.

Present illness: On March 17th, was called to patients home and found him in severe pain referred to the right iliac fossa, temperature 102¼°. On palpation I found diffuse induration. Gave patient hypodermic of morphine and atropine, also used rectal injection of hot water and olive oil, as patient was constipated, which relieved him. The next day I found patient up, as he stated "feeling good." Two days later was called during the night and found him in agonizing pain, flexed right thigh, nauseated, a usual picture of an appendicitis case. Hypodermic injections only partially relieved him. I suggested immediate operation, but patient and his family would not submit. The following day I found patient better and he remained so until March 21st, when he had three attacks similar to those previously described. I again suggested as the only relief surgical interference and finally he consented to operation.

Operation. On March 22d, I assisted Dr. D. N. Eisendrath in the operation; but to both our surprise found the appendix beyond some adhesions not involved. After removing it a digital examination was made, toward the gall bladder region, and a hard resisting mass was found. Dr. Eisendrath concluded that it was a cholecystitis. After closing the wound a new incision was made, and we found that we had a case of empyema of the gall bladder. After withdrawing the pus through an aspirator a large calculus was removed. The patient made an uneventful recovery after 4½ weeks the wound had entirely healed.

Patient states that he feels perfectly well.

J. G. aged 44, family history, negative. Past history: Patient looks robust, but has been in poor health for 15 years.

Venereal history: Had gonorrhoea three years ago, which was not properly treated, since then he has had strictures. Has been bothered with cystitis more or less ever since. Has been a moderate user of alcoholics.

Present illness: Dates from an attack about 10 years ago, when he was taken ill with a sudden pain over the liver radiating to the stomach. Then attacks followed which were months apart. On March 28, 1904, I was called to the patient's residence and found him suffering from acute pain radiating to the right kidney. Hypodermic medication partially relieved him. I prescribed soda phosphate ℥ ss every four hours before meals with good results; since he stated that he was feeling good.

I made an examination of his urine with the following result: Albumin and amorphous phosphates, traces of urobilin.

Microscopical examination: Some epithelial cell, hyaline casts. Diagnosis cholecystitis and Bright's disease.

Operation: On account of patients condition chloroform was used, but as soon as he was under the influence of the anesthetic syncope occured. Dr. Eisendrath used what he calls the Koenig-Mars method of heart massage, which consists of a number of sharp pressure movements over the precordial region. The patient was quickly resuscitated. Ether was then used. After the usual abdominal incision, the gall bladder was found to be filled with calculi and over 350 were removed. In addition a cholecystectomy was performed. The operation was a success; the patient making an excellent recovery, leaving hospital in 16 days.

WEST SIDE BRANCH.

Officers.

President.....John A. Robison, 297 Ashland Boul.
Secretary.....J. J. Alderson, 264 S. Halsted st
Delegate to Council.....A. I. Bouffleur, 100 State st

The West Side Branch of the Chicago Medical Society held a regular meeting at the Cook County Hospital, Thursday, May 16th, 1904, at 8:30 P. M. with Dr. Jno. A. Robison in the chair, our President, Dr. I. N. Danforth having been called from the city. Minutes of previous meeting read and approved.

On motion of Dr. Fitch the chairman was empowered to appoint a committee of two members to draft resolutions of regret at the death of Dr. F. C. Schaefer.

The program of the evening was a continuation of a symposium on the **Surgical Diseases of the Kidney,** and the first paper by C. J. Rowan on the "operative technique" ably covered the topic.

At the request of the chairman, Dr. Tieken gave an extempore talk on the **Preventive Treatment,** the doctor to whom the subject had been assigned not being present.

Discussion by Drs. Bouffleur, Harvey, Brown, and Reynolds. Dr. Bouffleur reminded the meeting that kidney surgery was largely of American origin and among the foremost surgeons in the work were Chicago men, and paid a tribute to the work of the late Dr. Fenger in this line and also commended the segregator of Dr. Harris.

Dr. Tieken talked on **cryoscopy,** going over the subject thoroughly. From his remarks, the method is not of general practical value.

It being our annual meeting the election was held by informal ballot resulting in the election of the above named.

A smoker was held.

Adjourned to meet Oct. 20, 1904.

J. J. Alderson, Official Reporter.

A regular meeting of the West Side Branch of the Chicago Medical Society was held at the Cook County Hospital Thursday evening, May 19th, at 8:30 P. M., the President, I. N. Danforth in the Chair.

Minutes of previous meeting read and adopted.

Dr. W. S. Royce read a paper on **Varicose**

Veins and Ulcers; Their Treatment, and gave a demonstration of his method.

W. S. Royce: I trust you will pardon me for attempting to interest you in a subject so common and ancient, but the following reasons I hope will partially justify me in the attempt:

1st. The great number of sufferers.

2nd. Many of them incapacitated from earning a living. Many more who are partially disabled and not able to fill positions in their chosen vocations, and many who, while filling positions, do so only by suffering great physical pain.

3d. The unsatisfactory results from the usually recognized proper methods of treatment, and the amount of work and trouble in their application. Those who have had dispensary experience, can well recall the washing, and salving, and powdering and dressing of these so-called old leg cases, who go around from one dispensary to another, dreaded by and almost considered a nuisance by all, until they become disgusted with themselves, finally giving up to the idea that they are incurable. A large majority, as you know, of these cases, are among the middle and so-called lower classes. People who are obliged to labor hard and spend much of their time upon their feet, and when finally the condition gets bad enough, become inmates of our charitable institutions, a burden on the community and to themselves. If we have a method of treatment which will cure these patients with no loss of time and without suffering, it must prove a boon and well worthy of adoption.

I will not take your time by discussing etiology and pathology subjects so well known to you all. With your permission I will demonstrate a treatment which I have used exclusively for about seven years in clinic, dispensary and private practice which has given such splendid results that I think I am justified in believing it the best.

The formula for this dressing is as follows:

Oxide of Zinc, 4 parts.
Sheet Geletin, 4 parts.
Glycerin, 10 parts.
Water, 10 parts.

If you will dissolve the gelatine in the water, add the glycerine and stir in the oxide of zinc, all being heated in a water bath, you will find it easily prepared. The above formula is, no doubt, familiar, being that of Unnas' Paste.

First we will suppose a simple varicose condition without ulcers. We will put the patient on a table in a reclining position with the foot elevated, the heel resting on a support. We will now scrub the leg with green soap and hot water, then wash off with alcohol and wipe dry. By this time the veins will be somewhat emptied and reduced in calibre though for the first dresing it is preferable, and this applies nicely in private practice, to have your patient remain in bed till you call from the night before elvating the leg during waking hours, then you will have the leg in the best possible condition. Now having melted your dressing, with a brush, a flat one about two inches wide is suitable, apply evenly over the foot and ankle, have dressing as hot as can be comfortably borne; now with gauze bandages about two inches wide, commence at the ball of the foot to apply after coming back about half way over the instep, always cutting off the bandage and starting again, never reversing; take a few strips of the bandage and apply around heel and ankle. Your knowledge of bandging will suggest how to do this nicely, but the bandage must never be reversed, but cut and started anew. Your dressing will hold each piece nicely in place, applying more dressing as needed. Now having the foot and ankle nicely covered, apply the dressing to leg and continue the bandage, but as the lower edge begins to leave the upper edge of the turn of the bandage below cut and start again. In this way you will have a nice smooth dressing from the ball of the foot to the knee. Now examine and if any irregularities in the contour of leg appears carry a strip of bandage around, breaking joints, as we might say. Now apply dressing over all lightly, and apply a bandage smoothly as you would in the regular way, not tightly. This outer bandage can be changed every few days as the patient wishes for cleanliness. Such a dressing, when there are no ulcers should be left on, first one two weeks—a month or more after, depending on the condition of the leg. When there has been much swelling, and the condition improves as it surely will, and the dressing in consequence is loose, a new one should be applied.

When we have ulcers to treat the following plan is to be employed: First, clean the ulcer, curetting when necessary, and if ulcers are very foul, I have found the application of a wet dressing of a solution of picric acid, 30 grs. to the pt. for 24 or 48 hours an excellent plan. Now prepare the leg as in the simple varicose condition. The ulcer dress as follows: Apply the dressing right up to the edge of ulcer, then apply a dry powder to ulcer very liberally. I have used several different dry dressings, but after long experience I have proved conclusively that these ulcers will heal faster and better under Campho Phenique Powder than any other. Now lay over ulcer about six thickness of gauze in size, let it be say for an ulcer two inches across, six inches. Now proceed with your bandages and dressing, over all as in the former condition. When first applied, the above powder produces some pain, but before you will have your dressing applied this will cease, not to return. The dressing on the ulcerated leg may be left on for ten days and when removed you will be surprised as the amount of healing which has taken place. I remember quite well, one case, a woman who came to my clinic with an ulcer about one inch by two inches, which was dressed as above, and instructed to come back in ten days. She did not return for about six weeks. In answer to the question why she did not return, as directed, she said it felt so good she did not want to. On taking off the dressing we found the ulcer entirely healed.

The reasons why this treatment is superior:

1st. The soothing effect of dressing, the glycerine de-hydrates the tissues, the oxide

of zinc exerts a soothing effect; the firm, yet elastic and equable support. We know that the blood vessels have resilience, which if aided, will enable them to resume near their normal caliber.

2nd. The small number of dressings required and the long intervals which elapse between same.

3rd. Absolutely no loss of time to the patient,

4th. The permanency of the cure.

5th. Comparison with some other forms of treatment.

Elastic stockings are taken off at night and not after patient is in a reclining position, and often not put on in the morning until patient is in an upright position, allowing veins to dilate more or less, at least, twice every twenty-four hours which absolutely prevents a cure. The same may be said of any form of frequent dressings. This dressing is always put on first after the leg has been elevated, and vessels have acquired their near normal caliber, and always put on subsequently after taking off the previous dressings before the patient is allowed to assume a standing position. Some cases the veins have become tortuous hard and tube like but still the Edema subsides and the dressing will exert firm, equable pressure and gradually there will be much improvement. The tissues become firm by massage of dressing and will furnish a support for vessels.

Something should be said of operative treatment,—Schades operation, re-section of veins, etc. I will say results are in most cases unsatisfactory, and this judgment is based on actual observation of results. Having examined all patients at the County Agent's Office, prospective candidates for Dunning, for seven years, I have seen many cases on which operations have been done who were in a worse condition than before.

Quoting cases would be taking too much of your time, but I could cite many instances of cure. One lady weighing 250 pounds, I now have in mind, with a large ulcer on left leg, inner aspect, lower 1/3 ulcer in size 2 by 4 inches, which had been open for seven years, cured by five dressings in three months. Woman ran a saloon, lived up stairs, tended bar much of the day, and never lost a day during the treatment. Historys of many cases could be given but this will suffice to illustrate what can be accomplished.

Gauze bandages should be used. Dressing will keep indefinitely and only needs to be heated by a water bath at time of using.

Dr. J. O. Price read a paper on **Pyelo Nephritis**, complicating pregnancy with report of a case, giving a concise clinical report of a case where first the right and later the left kidney were infected as proved by ureteral catherization. The urine showed on examination, pus cells, albumen and the various casts. The patient was in severe septic condition. Gradual and complete recovery followed after evacuating the uterus of the products of conception and other indicated treatment.

Dr. Frederick Tice presented a case of **Addison's Disease** in a Scotch woman, 73 years old going over the clinical features, the differential diagnosis, comments on the various methods of treatment in a most thorough manner.

The continuation of the program was a symposium on the **Surgical Diseases of the Kidney.** Dr. F. C. Schaefer presented a paper on the **Differential Diagnosis,** a complete and forceful presentation of the subject assigned him.

Diagnosis of Suppurative Surgical Diseases of the Kidney.

Frederick C. Schafer, M. D.* When our president requested me to participate in a symposium on renal affections he asked me to speak for ten minutes upon the diagnosis of suppurative pyelitis, pyelo nephritis, nephritis, and so-called surgical diseases in general. The latter part of the subject can hardly be complied with in the limited time allotted, for with the recent introduction of decortication of the capsule for the various forms of Bright's disease we may fairly maintain that almost the last vestiges of medical kidney diseases have given way to the inroads of surgery, and now practically all diseases of the kidney may in a sense be called surgical; and yet we must admit that the doctor of internal medicine will still continue to have his share of kidney diseases to treat. The line of demarkation between the surgical and medical kidney is not so sharply defined as to completely exclude either the general practitioner or the surgeon from their treatment.

*Shortly after reading this paper died suddenly at his home, lamented by all who knew him.

In other words we shall continue to have an equal and mutual interest in the care of kidney patients.

In trying to arrive at a diagnosis of surgical kidney diseases we should first obtain as complete a history as possible of the patient's past record comprising his more recent as well as present constitutional condition. Many kidney affections have had their origin in some antecedent pathological condition which reduced their vitality or left some slight lesion which rendered the organs open to attack of micro-organisms; paved the way for the development of neoplasms or placed them in a position from within or from without their structure to be mechanically or otherwise seriously damaged if not actually destroyed. It is generally conceded that most so-called surgical diseases of the kidney originate from the lower portion of the urinary tract resultant from diseased urethra, bladder, prostate, seminal vesicles ureters, or even from the lower end of the penis, the pathology being of an ascending character. However the local conditions can and do serve as exciting causes of kidney involvement far more readily in patients whose organs may have already been weakened or placed in a receptive condition by internal diseases such as tuberculosis, arteriosclerosis, Bright's disease, rheumatic heart, or the dissemination of suppurative germs set free from a typhoid fever lesion, pneumonia, pyaemia, septicaemia, osteo-myelitis, exanthematous diseases, absorption from the alimentary canal, etc.

Any one of these constitutional affections may have been a predisposing cause or even the

exciting cause of the disease before us, and again both conditions may have blended in producing the disease we are investigating.

We can readily conceive how a patient with arteriosclerosis, suffering from uric acid accumulation can have a large mulberry stone form in the pelvis of a kidney, the movements of which cause abrasions to occur in the lining membrane producing infection atria through which germs from an infectious disease enter as the urine containing them is being eliminated by the kidney, giving rise to suppurative pyelitis, or pyelo nephritis, or if the same individual has an enlarged prostate with suppurative cystitis an ascending pyelitis will follow; and again a fragment of the stone in the kidney pelvis descending may have completely plugged a ureter resulting in the production of a hydronephrosis the latter converted into a pyonephrosis by the pus germs in his circulation.

If we are satisfied from the history that kidney disease exists the question confronts us is it of the ascending type and if ascending is it obstructive or non-obstructive, for if the urinary passages are occluded the symptomatology will be influenced accordingly. The obstruction may be the result of disease from within the genito-urinary canal, of an inflammatory nature and infectious resulting in stricture formation. There may have occurred a tubercular ulcer followed by cicatricial contraction, or caused by occlusion resulting from a deposit of caseous tubercular material; a calculus may have lodged in the ureter or a hypertrophied prostate blocked the outlet of the bladder. The obstruction may be attributable to causes external to the urinary tract. There may be a possible kinking of the ureter accompanying a movable kidney, or there may be a mechanical pressure from without occasioned by neoplasm, inflammatory adhesions, traumatism, gravid uterus, etc.

Remembering that the so-called suppurative surgical kidney diseases are:

1. Suppurative pyelitis.
2. Suppurative Pyelo-Nephritis.
3. Suppurative Nephritis.
4. Pyo Nephrosis.

In our endeavor to make a diagnosis of surgical suppurative kidney diseases we rapidly pass the foregoing points through our minds, while listening to our patient's story, and then proceed with the examination in a systematic manner: 1. By noting the objective symptoms. 2. By inspection. 3. Palpation. 4. Urine analysis. 5. Cystoscopic examination if necessary. 6. Segregation. 7. Cryoscopy. 8. Radiography.

The objective symptoms were already given by the patient. They are direct, systematic, reflex, and urinary. The direct symptoms are the least to be depended upon. However, pain and tenderness are apt to be present in cases of severe suppurative pyelitis, pyelo-nephritis, and nephritis. It may be slight in non-obstructive inflammation. The pain may be constant or intermittent. Exacerbation occurs with increased intensity if the disease becomes suddenly obstructive by a kinking of the ureter or the plugging of it caused by a calculus, blood clot or the product of inflammation, or a polypus. Should the suppurative process have extended to surrounding tissues producing perirenal inflammation, abscess or extravasation, the pain becomes intense, followed in some instances by abdominal distension, pressure upon the diaphragm, interfering with breathing and the heart's action.

The systemic symptoms are of inflammatory origin and uremic, the degree of the latter depending upon the extent of impaired function. In like manner the degree of temperature will be dependent upon the intensity of the inflammatory process. If the latter is slight, fever may be entirely absent, on the other hand we may have all the phenomena of the most profound kind, including chill, dry skin, furred tongue and delirium.

The most important **reflex symptoms** are referred to the lower urinary tract consisting in exaltation of renal functions or inhibition of the latter. The reflex phenomena may cause complete retention of urine while pain is referred to the neck of the bladder, to the penis, testicle, or along the ureters; occasionally the pain is referred to the rectum, coccyx, the posterior or anterior portion of the thigh.

Inspection reveals peculiarities in the attitude of the patient. Flexure of thigh or body, or leaning forward is indicative of tenderness about the psoas muscle. May lean to one side on account of pain about the lumbar region. Is careful of himself in stooping; the muscles of abdomen are rigid, those of the spine likewise as in case of spondylitis.

Occasionally swelling is seen in the loin or abdomen.

Palpation will usually elicit tenderness about the kidney, while the muscles become tense, and if pyo nephrosis coexists with hydronephrosis swelling will generally be detected and possibly fluctuation: the latter depending upon the amount of distension. In the absence of obstruction palpation will be more difficult; still in all cases of acute inflammation there will be tenderness. The more chronic cases will be less sensitive to pressure.

The enlargement accompanying "obstructive" suppurative reanl disease will have to be differentiated from:

First, Affections of the Kidney—
Traumatic Inflammation,
Hydro-nephrosis,
Cysts,
Tuberculosis,
Haematoma,
Adrenal Tumors,
Floating Kidney.
Second, Affections not of the Kidney—
Gall Bladder distension,
Displaced or enlarged Spleen,
Post Peritoneal growth or Cyst,
Abscess of Vertebra,
Pathological condition of Pancreas,
Pelvic diseases, Tumors,
Abdominal tumors, Abscesses, etc.

The urinary symptoms relate to increased or diminished urinary secretion, or even complete suppression. Alterations in its appearance by

the action of bacteria and changes in chemical reaction, also the presence of blood, pus, epithelial cells, tube casts, and albumen.

The urine may be either acid or alkalin, when freshly voided, and should be examined while fresh, having been withdrawn in an aseptic manner. The reaction is dependent largely upon the kind of bacteria that cause the suppuration, being of course, influenced by the medicine the patient may have taken. If the bacillus coli commune exist alone the urine may be acid. The staphylococci and proteus vulgaris cause an alkalin reaction, setting free ammonia. In a large percentage of cases the changes as found are occasioned by mixed infection, contamination having occurred from pathological conditions of the lower urinary tract which have to be eliminated in order to draw correct conclusions. The presence of pus, kidney epithelium and casts, in connection with the other symptoms, is usually positive evidence of suppurative kidney disease. If we are in doubt after having made the urine examination, recourse should be had to cystoscopy with uretheral catheterization or segregation, which at the same time enables us to ascertain the condition of the other kidney if only one is involved and gives an idea as to the relative functional activity of the kidneys.

Cryoscopy is of value in this connection, enabling us to determine the urinary efficiency of the healthy part of diseased kidneys and giving a proximal idea of the amount of solids retained in the blood. It probably comes the nearest of the newer methods of examination to being an accurate warning signal as to the dangers of resorting to radical operation.

This method has been used and extolled by Koranyi, Tinker, Casper, Kummel, and others. Electrical conduction, a more recent method, has been advanced by Lowenthal, in the same line of experimentation, claiming that "urine containing a given number of soluble molecules transmits electrical currents with definite degrees of exactness." We may expect aid from this source in the near future.

Radiography is of value in case of the coexistence of stone.

Differential Diagnosis.

A few points will be rapidly alluded to.

Traumatism—History of onset gives clue. If capsule is ruptured there will be symptoms of extravasation. There is generally early hematuria, accompanied by shock.

Hydronephrosis—Absence of fever temperature. Tenderness slight in comparison to swelling. History—frequent—of disappearance of cyst following free urination; after a time reappearance of swelling. Urinary findings absent except when obstruction gives way.

Cystic Kidney of Hydotal Origin—Hooklets in urine. Slow growth. Absence of tenderness. Irregular elevation of surface.

Adrenal Tumor or Cyst—Palpation may detect groove between growth and kidney. Skin bronzed. Irritable stomach. Hair in some instances appears of marked and rapid growth in different portions of the body. Tumor is unusually mobile. Pain deep seated. No urinary findings unless the growth has extended or ruptured into the pelvis of the kidney, or has produced nephritis by pressure. Asthenia.

Tuberculosis—Often presents irregular outline in palpation. Tenderness not always present. Family history of Tuberculosis. Tubercular evidences in other organs or tissues. Urinary findings or bacillus of Koch, blood, pus, nocturnal elevation of temperature.

Hematomia—History of traumatism, with possible early hemorrhage in urine. Tenderness usual, may be absent. No fever.

Neoplasms—Slow growth except sarcoma. No fever, unless infection has occurred. Urinary findings, blood, epithelium, cells, characteristic of the growth. In case infection has taken place pus cells and bacteria and casts may be discovered with the microscope. In case of cancer, darting pains.

Since our banquet in February we have had an average attendance of about sixty, and great interest manifested in the subjects presented. Our next meeting occurs June 16th, at which time the annual election will be held.

J. J. Alderson, Official Reporter.

NORTHWEST BRANCH.

Regular meetings are held the first Friday of each month at 8 p. m., at Schoenhofen Hall Restaurant, cor. Milwaukee and Ashland avenues. Membership —.

Officers.

Presimdent.....M. H. Luken, 826 N. Irving ave.
Vice President.....Karl F. M. Sandberg, 684 N. California ave.
Secretary.....Louis J. Pritzker, 418 W. Division.
Treasurer.....C. F. Roan, 740 W. North ave.
Councillor.....E. S. Seufert, 831 Milwaukee ave.

The Northwest Branch of the Chicago Medical Society held its annual meeting on Friday, June 3d, 1904, at 8:30 P. M., at Kopp's Hall, Cor. North and California Aves.

The program consisted of the President's annual address, which on this occasion was on the subject of medical organization; a brief report by the Secretary on the work and progress of the society, and election of officers for the ensuing term.

By motion of E. C. Senfert, the President's address was gratefully accepted.

By motion of H. E. Wagner, a vote of thanks was taken in acknowledgement of the Secretary's faithful services to the society, his successful efforts in rendering the meetings interesting and well atended and his efforts in conjunction with the local committee on organization.

The above named gentlemen were unanimously elected to their respective offices.

On motion the society adjourned until Oct. 7th, 1904.

The Illinois Medical Journal.

EDITORIAL OFFICE, 522 CAPITOL AVENUE, SPRINGFIELD.

Copy for advertisements must reach the editor's office by the 20th of the month in order to secure insertion.

PUBLISHER'S NOTES.

The Journal is not responsible for any medical or therapeutical views expressed in this department.

Internal Medication in Gonorrhea.—The administration of Cystogen, gr. v. four or five times daily during the period of treatment of gonorrhea will greatly limit the area of infection, prevent re-infection and reduce inflammation. By the liberation of formaldehyde it causes the urine to become an antiseptic solution, thus insuring a thorough flushing of the urinary tract from the kidneys to the meatus with an agent that is actively opposed to germ life. This will be found to be an important adjunct to local treatment. For the convenience of patients it is often desirable to order Cystogen in tablet form, it being manufactured in five-grain tablets.

Neuro-Lecithin, the only true Lecithin; a product of nerve tissue, not of eggs. Indicated in debility, arrested development, nervous and mental diseases, as a nerve reconstructive, in diabetes and tuberculosis. Mention this journal. For literature, address The Abbott Alkaloidal Co., Ravenswood Sta., Chicago, Ill.

Danger From Impure Milk.—The high infant mortality in all parts of this country and particularly in large cities has caused some interesting investigation of the milk supply.

In Baltimore, Bassett & Knox examined a large number of samples of milk supplied to babies in hospitals and found an average bacterial contents of over four million to the c.c. The New York Board of Health found many samples last summer running ten millions to the c.c. A few years ago at Stamford, Conn., over four hundred cases of typhoid fever developed in families supplied from a single dairy. These are but a few instances of the grave dangers to which infants as well as adults are subjected.

For obvious reasons cow's milk must be the principal substitute for mother's milk when from any cause the child cannot be fed at the breast. It must also constitute an important part of the dietary of breast-fed children after they are weaned. It has been well established that the number of cases of cholera infantum and allied conditions in a community decrease in direct proportion to the purity of the milk supply. In the Highland brand evaporated cream, the physician will find an absolutely pure milk which can be modified to meet every indication. It is simply full-cream cow's milk evaporated and sterilized by a special process which improves its digestibility and insures an excellent flavor. It is manufactured under the strictest supervision and is absolutely germ free. It is the simplest, yet most complete food for infants not nursed at the breast.

Catarrh of the Bladder.

Dr. A. C. Marquis, of Collins, Mo., says: "Your sample of Cystogen received a few days ago. I had a case of catarrh of the bladder with very disagreeable, ammoniacal odor of urine that had been giving me some trouble for twelve months. I gave the tablets with good results."